

**Stop the Summer Slide Pilot Project  
Summer 2015  
Program Evaluation Report  
2-5-2016**

**Submitted by  
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The Stop the Summer Slide Pilot Project (SSSLP) was a new Idaho Commission for Libraries (ICfL) program for 2014. It was continued for a second year during 2015. Six Idaho elementary schools, all of which qualified for Title I funding, participated in the 2014 pilot. One of these schools stopped participation in 2015 because the school's librarian was re-assigned to full time classroom teaching. The target age groups of students are kindergarten through 2<sup>nd</sup> grade. The project provides funds to the elementary school libraries to support open hours during summer vacation. In addition to these funds, three of the schools are provided books for children to take home over the summer to stimulate summer reading. During 2014 two of the three schools received six books for each K-2 child. The third school received six books for K-3 students. During 2015 the number of books was changed to eight books sent home at the end of the school year followed by two books sent home via mail during July. Each spring, the book giveaways were modeled after the book fairs instituted by Allington, McGill-Franzen, Camilli, Williams, Graff, Zeig, Zmach, and Nowak (2010) which had been found to be successful at addressing summer reading loss. The other three schools during 2014 and two schools during 2015 were provided just one book per student that was sent home at the end of the school year. In the remainder of this report, the schools that did full book give-aways and had open hours will be referred to as full implementation sites. Those sites that just had open hours and provided one book will be referred to as partial implementation sites.

During 2014 focus groups were conducted at two schools during spring 2014 to collect information from stakeholders about what children, parents/caregivers, and families need to foster literacy development in the home, especially over the summer months. These were not repeated during 2015 but a full report of the *2014 Stop the Summer Slide Pilot* is available on the ICfL web site that provides results from the focus groups. Parent/caregiver surveys were administered both years, but the timing of the survey changed between 2014 and 2015. During 2014 surveys were administered the spring before the program started in the summer. Surveys were available in both English and Spanish and asked parents/caregivers about home reading habits, sources for books for children over the summer, and whether they and/or their children would patronize their public school library during the summer if it were to remain open. The results from this particular survey were provided in the 2014 report. For 2015, parent surveys were distributed in the fall immediately following the conclusion of the summer program and just after children returned to school. The results of the fall 2015 survey are reported later in this report. And finally, during both years all schools were asked to submit spring and fall Idaho Reading Indicator (IRI) scores for all K-3 children in the school and mark those that participated in their summer public school library program. The IRI is an early literacy screener given to all K-3 students in Idaho at least twice each year, once in the fall and once in the spring. Depending on the grade level and time of assessment, the screener measures either letter identification, letter

sound identification, or reading rate. In the case of this program evaluation, the IRI was used as a measure of summer reading loss. It was hypothesized that students who participated in the summer public school library programs would experience less loss over the summer, as measured by the IRI, when compared to similar children in the school who did not participate. It was further hypothesized that children in the full implementation sites would have less summer reading loss when compared to children at the partial implementation sites.

In the remainder of this report, when comparison between the 2014 and 2015 programs provides additional insights into program outcomes, such comparisons will be provided. Results from the 2015 parent/caregiver surveys will be provided first followed by a brief discussion of the final reports submitted by the sites and summer reading loss results.

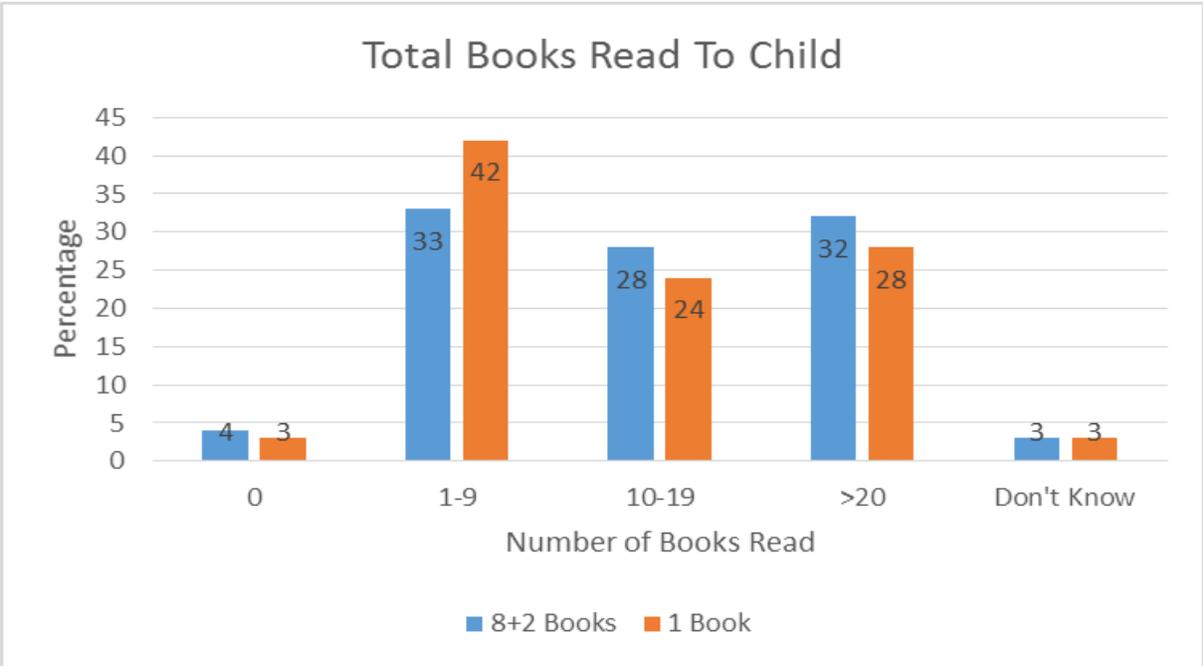
### **2015 Parent/Caregiver Survey Results and Discussion**

The three schools where students received the 10 books returned 641 surveys. The two schools where students received one book returned 379 surveys. Exact response rates are difficult to compute since the total available population of parents/caregivers can only be roughly estimated, but it appears that in most instances schools achieved better than a 50% response rate. This is excellent given that the surveys were sent home to be completed and returned to school. Achieving such a high response rate shows that the participating schools were committed to the project. They should be thanked for this since commitment is key to the success of any program and achieving high survey response rates is difficult and time consuming.

Two different parent surveys were developed. One for the full implementation schools and one for the partial. The surveys had common questions but also some questions unique to each group. Following are results and discussion organized by the questions asked on the surveys. The common questions will be presented and discussed first followed by those that were unique to each survey.

The first question asked, "Please estimate the total number of books you or another adult read to your child this summer." This question was asked of both full and partial implementation schools. Figure 1 provides results by type of school.

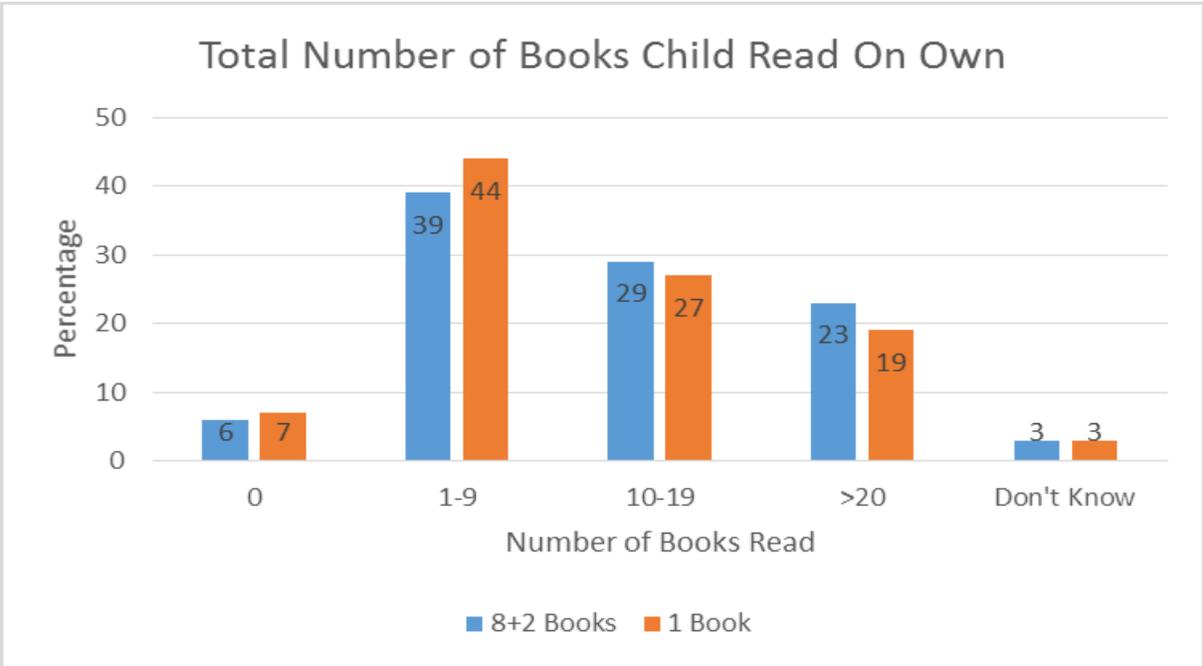
Figure 1: Total Books Read to Child: Full and Partial Implementation Sites



The full implementation schools had greater numbers of respondents in the 10-19 and >20 categories and fewer in the 1-9 category, but these differences were not statistically significant using a Pearson chi square test of association (Pearson Chi square=6.94; df=4; p=.14). Thus, although there is some evidence that greater amounts of reading occurred in the full implementation schools the difference is not great enough to be generalizable.

The second question asked, "Please estimate the total number of books your child read on their own this summer." This question was asked of both full and partial implementation schools. Figure 2 provides results by type of school.

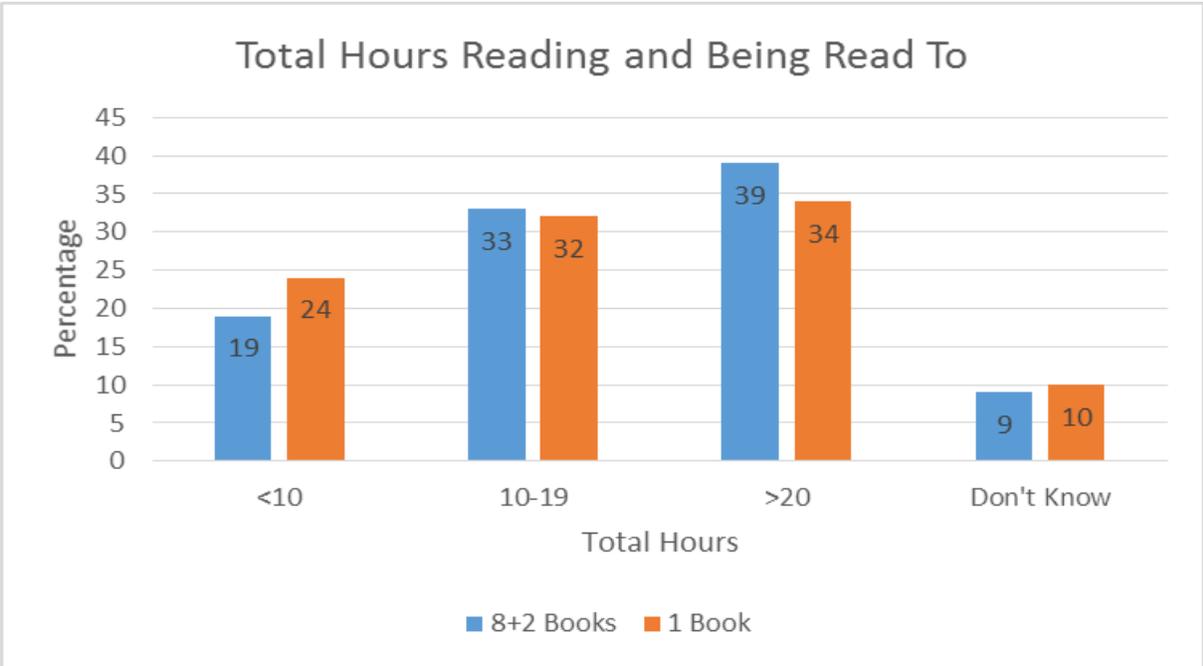
Figure 2: Total Books Child Read On Their Own: Full and Partial Implementation Sites



The full implementation schools had greater numbers of books read by children on their own but once gain the differences between full and partial implementation schools were not statistically significant (Pearson chi square=5.21; df=4; p=.27). Thus, although there is some evidence that students in the full implementation schools read more books on their own the difference is not great enough to be generalizable.

The third question asked, "Please estimate the total amount of time your child spent reading, and being read to, this summer." This question was asked of both full and partial implementation schools. Figure 3 provides results by type of school.

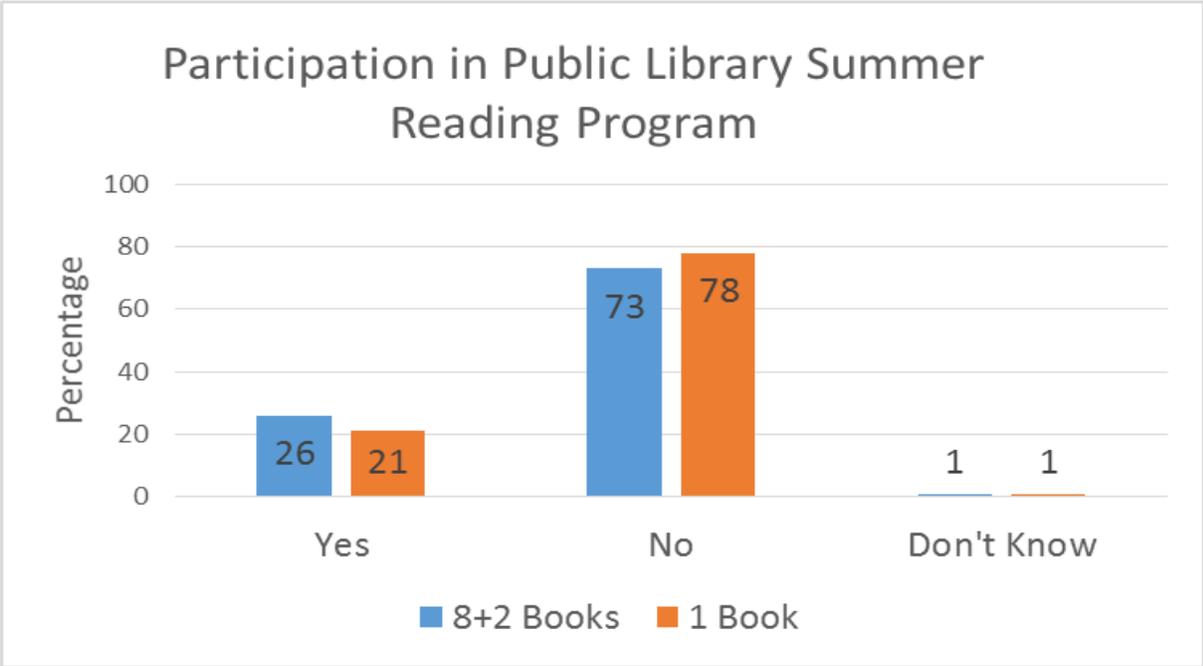
Figure 3: Total Hours Spent Reading: Full and Partial Implementation Sites



The full implementation schools had greater numbers of hours read but once again the differences between full and partial implementation schools were not statistically significant (Pearson chi square=6.68; df=4; p=.15). Thus, although there is some evidence that students in the full implementation schools read more the difference is not great enough to be generalizable.

The fourth question asked, “Did your child participate in the public library’s Summer Reading program?” This question was asked of both full and partial implementation schools. Figure 4 provides results by type of school.

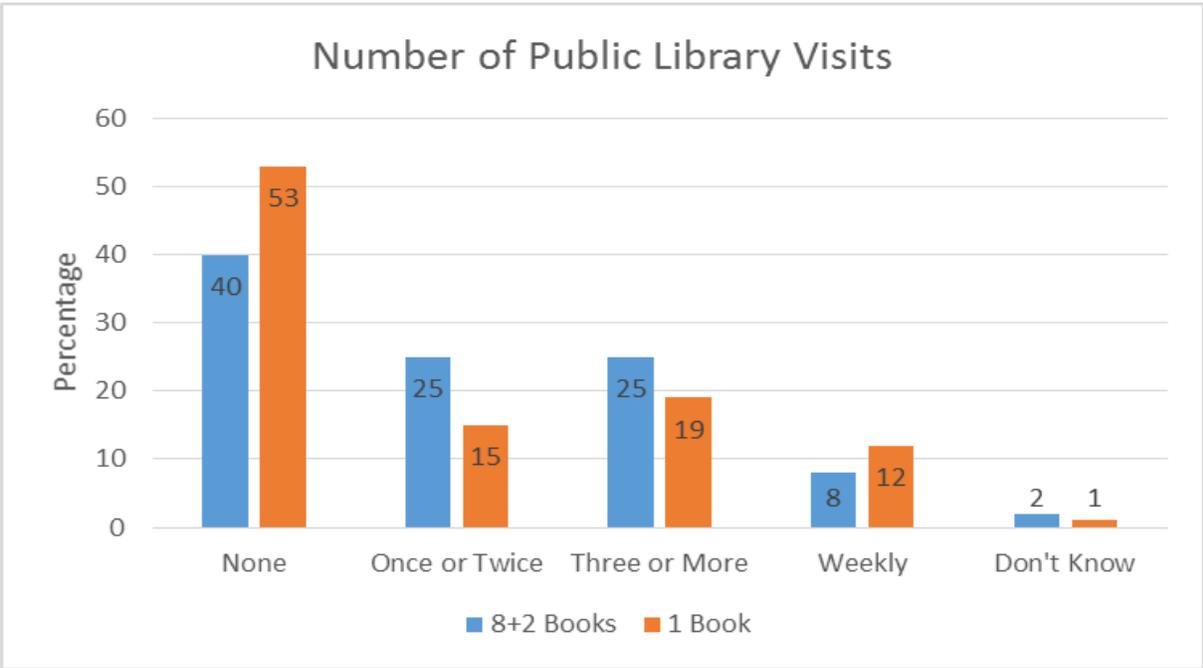
Figure 4: Participation in Public Library Summer Reading Program: Full and Partial Implementation Sites



The full implementation schools had greater numbers of summer reading participants but the differences between full and partial implementation schools were not statistically significant (Pearson chi square=2.37; df=1; p=.12). Thus, although there is some evidence that students in the full implementation schools attended summer reading more often the difference is not great enough to be generalizable.

The fifth question asked, “How many times did your child visit the public library over the summer?” This question was asked of both full and partial implementation schools. Figure 5 provides results by type of school.

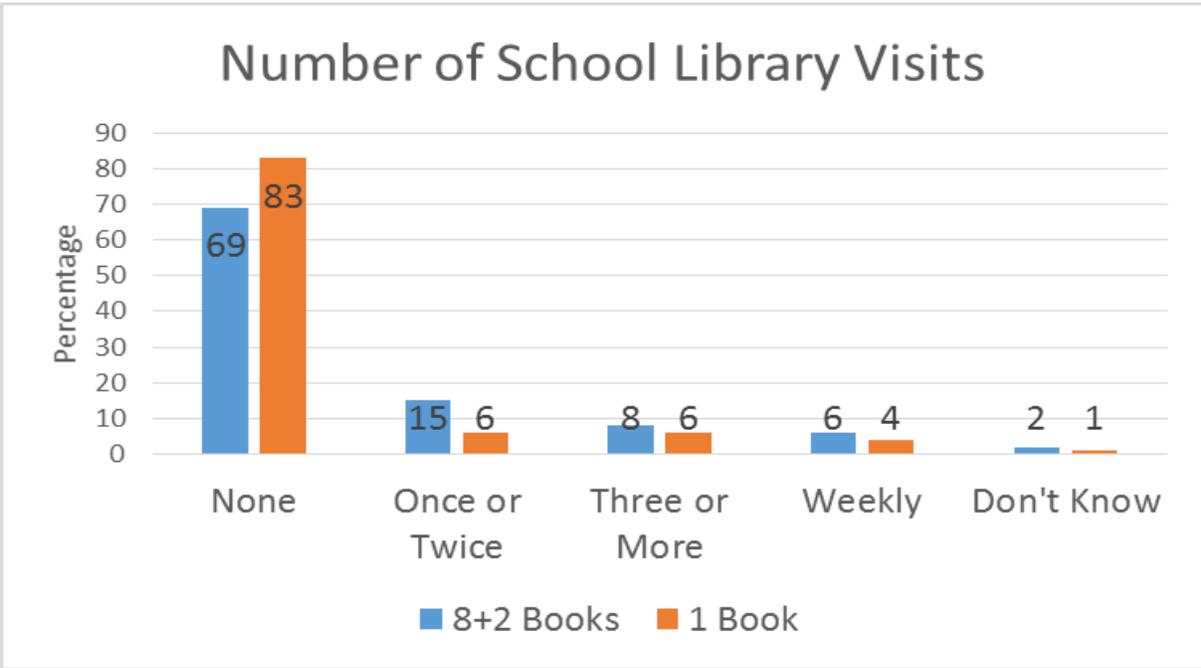
Figure 5: Number of Public Library Visits: Full and Partial Implementation Sites



The full implementation schools had greater numbers of public library visits, except in the weekly category where partial implementation sites had more. There was a statistically significant association between type of site and public library visits (Pearson chi square=26.73; df=4; p=.00). This means that public library visits overall were greater for the full implementation sites and this difference is generalizable to the population of students in these schools. This is a quite positive finding since a goal of all *Read to Me* programs is to increase local public library use. This appears to have been accomplished to a greater degree in the full implementation schools. Receiving the 8 books at the end of the school year and the two additional books in July via the mail appears to have stimulated more library visits over the summer.

Another question asked of both types of sites was “How many times did your child visit the school library over the summer?” Figure 6 provides results by type of school.

Figure 6: Number of School Library Visits: Full and Partial Implementation Sites



The full implementation schools had greater numbers of school library visits. There was a statistically significant association between type of site and school library visits (Pearson chi square=27.17; df=4; p=.00). This means that school library visits overall were greater for the full implementation sites and this difference is generalizable to the population of students in these schools. This is a quite positive finding since a goal of the *Stop the Summer Slide Pilot Project* was to stimulate students to visit their local school library over the summer. Both types of implementation sites did this but it appears to have been accomplished to a greater degree in the full implementation schools. Receiving the 8 books at the end of the school year and the two additional books in July via the mail appears to have stimulated more school library visits over the summer.

All parents/caregivers, no matter the type of site, were asked if their child had read more over the summer. Table 1 provides the results by site.

Table 1: Comparison of Amount Read Over Summer to Previous Summers: Full and Partial Implementation Sites

| Did your child read more this summer than in previous summers? |     |     |                                 |            |
|--|-----|-----|---------------------------------|------------|
| Group  | Yes | No  | Same amount as previous summers | Don't know |
| 8+2 Book Schools (n=630)                                       | 70% | 11% | 16%                             | 3%         |
| 1 Book Schools (n=372)   | 62% | 12% | 24%                             | 2%         |

More parent/caregivers in full implementation schools reported their child reading more during summer 2015 than in previous summers than did parent/caregivers from partial implementation schools. Fewer said that their child read the same amount as in previous summers. Essentially equal numbers responded that their child did not read more during summer 2015 or didn't know. There was a statistically significant relationship between type of site and response to this question (Pearson chi square=11.50; df=3; p=.009), meaning that full implementation schools had higher rates of more reading during summer 2015 than in previous summers when compared to partial implementation schools. This is another very positive finding and adds further support to the assertion that the full implementation model of the program stimulates greater amounts of reading over the summer. These amounts are not large, only 8% more respondents in the full implementation sites said yes that their child read more summer 2015 than in past summers, so the ICfL and the sites might want to discuss cost/benefit ratios. In other words, is an increase of 8% in yes responses worth the cost of providing 10 books, two of which were mailed home during July, instead of one book.

The question about whether children had read more during summer 2015 than in previous summers was followed by the request for additional information found in Table 2.

Table 2: Explanation for Why Children Read More During Summer 2015: Full and Partial Implementation Sites

| If you answered Yes, please explain why your child read more. Check all that apply:   | 8+2 Books (n=641) | 1 Book (n=379) |
|---|-------------------|----------------|
| <i>a. More good books at home to read.</i>  | 29%               | 14%            |
| <i>b. Child has gotten older and is reading independently.</i>                        | 46%               | 46%            |
| <i>c. I had more time to read to and with my child during this particular summer.</i> | 17%               | 14%            |
| <i>d. Siblings were able to read more to my child.</i>                                | 15%               | 9%             |
| <i>e. Other</i>   | 12%               | 17%            |

The percentage of full implementation site respondents reporting more reading because of “More good books at home to read” was twice that of partial implementation sites. This is a very positive finding since it appears that having the 10 books in the home might have been a cause of more reading. Another reason for more reading that full implementation sites reported more often than partial implementation sites was “Siblings were able to read more to my child.” Perhaps the reason siblings were able to read more often was because there were more good books in the home because of the full implementation model providing a total of 10 books. Nearly half of both types of site responded that one reason for their child reading more was that they had grown older and thus had become more independent readers. This is also an interesting and important finding. The results underscore the importance of adults in young children’s lives concerning reading. When children are emerging and beginning readers, they are almost completely dependent on the adults and older siblings in their lives for being read to or for someone to listen to them as they read. Once they become independent readers, they can

read without the need for an adult or older sibling to be present. It is thus important for parents involved in the *Stop the Summer Slide Pilot Project* to understand this.

Other questions were asked depending on the type of site. For full implementation sites, parent/caregivers were asked a series of questions about the eight books received at the end of the school year. Table 3 provides the questions with results.

Table 3: Usage and Popularity of 8 Read and Return Books: Percentages

| <b>Your child brought 8 “Read and Return” books home from school in May to read over the summer, along with a backpack. Please answer the following:</b> |          |          |          |          |          |          |          |          |          |           |
|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| <b>Number of Books →</b>   | <b>0</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>8</b> | <b>DK</b> |
| a. How many of the original 8 Read and Return books did they read (or have read to them)? (n=553)  | 1        | 2        | 3        | 3        | 7        | 5        | 6        | 3        | 55       | 15        |
| b. How many of the original 8 Read and Return books did they enjoy? (n=549)  | 2        | 1        | 4        | 3        | 6        | 7        | 10       | 6        | 43       | 18        |

DK=Don’t know

Fifty-five percent of respondents read all eight books and 43% reported their child enjoyed all eight. Nearly two thirds of respondents read six or more books and 59% reported their child enjoyed six or more books. These are very positive findings and provide strong evidence that the ICfL chose the proper number and the proper type of books to send home. Parents/caregivers were also asked “Did your child exchange some or all of the 8 Read and Return books for different ones at the school during open school library days over the summer? Stimulating parents/caregivers and students to read the books and then exchange them at their school library was a primary goal of the program. Twenty-nine percent said yes to this question, 70% said no, and 1% didn’t know. Although 29% appears to be a low number of people who exchanged books, when put into the proper context, it is more impressive. Out of every 100 children in full implementation schools, 29 of them exchanged books in their school libraries over the summer. This, of course, is predicated on the assumption that each family only had one school-age child. If the family had more than one, then the actual number of children would be greater. This represents a sizable number of children who had increased access to books and additional opportunities to have positive experiences in their school library over the summer months. It is possible that the 29% were families who already visited their public library over the summer so the school library was just another regular stop to acquire books. But this does not appear to be the case in all instances. Interestingly, 35 respondents who said that they had exchanged books at their school library also said that they had not visited the public library. For these 35, it is possible that the school library was the only source of books outside the home over the summer and the only library that was visited. Roughly 550 parents/caregivers responded to the survey from the three full implementation schools, so these 35 represent 6% of respondents. To stimulate 6% of the parents/caregivers of young school-age children to visit a library and exchange books over the summer who would not have probably done so without the program is an important finding. Of course, there are alternative explanations for these findings so additional, more in-depth research is needed.

Two different but similar questions were asked of the two types of implementation sites about the effect of receiving books. In the case of the full implementation sites, the question specifically asked about the two books received in July in the mail. In the case of the partial implementation sites, the question asked about the book and backpack received in May before the end of school. Table 4 provides the specific questions and the results.

Table 4: Effects of Receiving Books by Implementation Site

| <b>8+2 Book Schools (n=641): Your child received two additional paperback “Read and Return” books in the mail in July. Please circle all of the following that apply <u>or</u> 1 Book Schools (n=379): Your child received a book and a backpack in May. Please circle all of the following that apply.</b> | <b>Percentage Checked: 8+2 Books</b> | <b>Percentage Checked: 1 Book</b> |
|---|--------------------------------------|-----------------------------------|
| <i>a. The books encouraged more reading</i>   | 55%                                  | 44%                               |
| <i>b. The books encouraged me to take my child to the school or public library</i>  | 14%                                  | 18%                               |
| <i>c. The books reminded me to sign my child up for the public library’s summer reading program</i>   | 5%                                   | na*                               |
| <i>d. We did not receive the books</i>  | 15%                                  | 24%                               |
| <i>e. Don’t know</i>  | 10%                                  | 22%                               |

\* This response option was not provided the partial implementation sites.

Fifty-five percent of full implementation respondents said that receiving two books in July encouraged more reading. This is a sizable percentage but it will be up to the ICfL to decide whether this is a large enough response to justify the time and money spent to purchase and mail the books. It is unknown at this time the impact the July mailing had on the overall amounts of reading reported earlier in this report. In other words, it is not known at this time the degree to which the July mailing influenced the slightly higher amounts of reading reported by the full implementation sites when compared to the partial implementation sites. Future evaluation research might be considered where some sites receive the eight books at school and the additional two books in July, other sites receive only the eight books at the end of the school year, and still other sites receive only the one book at the end of the school year. In this way, the specific influence of the July mailing could be measured. Similar percentages of respondents reported the books encouraging them to visit their school or public library. Since stimulating public school library visits was one of the primary goals of the *Stop the Summer Slide Pilot Project* these percentages are important information about program outcomes and should be examined to determine whether efforts are needed to increase the percentages. Concerning stimulating public library summer reading program participation, the full implementation program had negligible influence. This is another goal of the *Stop the Summer Slide Pilot Project*, to increase summer reading program participation, so the ICfL may want to revisit how the public schools and their local public libraries are partnering for summer programming. In the future, it is recommended that this question be asked of partial implementation sites. It is possible that sending one book home with a backpack might influence summer reading participation. Comparing this to the rates found in full implementation sites could be informative. And finally,

the percentages of respondents stating that they didn't receive the books, in the case of full implementation sites this referred to the two books mailed in July and in the case of the partial implementation sites this referred to the one book received at the end of the school year, are relatively low, especially for the two books mailed in July. To have only 15% of full implementation site respondents report not receiving the books is quite impressive given that people oftentimes move during the summer months. But having nearly one quarter of partial implementation site respondents report not receiving the one book and backpack at the end of the school year is cause for concern. Why this large rate occurred should be investigated since it represents a sizable number of books and backpacks that may have not been distributed. Or it may mean that parent/caregivers forgot receiving the materials.

A final open-ended question asking for additional comments was included on both surveys. Twenty-four comments were made by partial implementation site respondents and 90 were provided by full implementation sites. Comments from the partial implementation sites ranged widely with no particular type of comment being more prevalent than others. Several people reported that they liked the book and backpack and one said that the materials encouraged more reading. Two said they enjoyed visiting the school library, and four respondents talked about their child living with a father or other relative during the summer and thus not being able to participate. Comments from the full implementation sites were more numerous and more extensive. It appears that receiving the eight books and the two mailed in July made an impression on respondents. Comments ranged widely and no particular type of comment stood out but some were made more often than others. For example, thank-you's and statements about the program being great and enjoying/loving the program occurred 36 times. Children being excited by receiving books in the mail was mentioned 11 times. Interestingly, eight respondents mentioned some degree of displeasure with the program. This stemmed from several things such as having too many books to keep track of during the summer, especially if more than one child received the books; the respondent stating that they don't need 10 books during the summer; or respondents wanting the ability to opt out of the program. Seventeen respondents mentioned life circumstances that impinged on utilization of the program, such as the child living in another household over the summer, work schedule conflicts, other summer activity conflicts, and the family being away all summer. Thirteen reported the books encouraged more reading over the summer.

### **Partial Summary and Discussion of Final Reports Submitted by Sites**

Not a lot of details from the final reports will be provided because with only five reports it is better to read all of them to derive valid information concerning the workings of the program instead of trying to summarize them. But there are a few things that can be reliably summarized.

First, the sites did a thorough job promoting the *Stop the Summer Slide Pilot Project* to their constituents. Parent agreements were completed during spring parent-teacher conferences at most sites. Well-attended family events were held promoting the program. Robo calls were made to all families at several of the sites and a number of other actions and activities were undertaken to promote the program. In aggregate, much energy was expended promoting the program through a variety of venues and channels. Even after all of the efforts,

however, attendance at summer library hours remained relatively low at most sites and respondents in their final reports expressed surprise at this. Several said that they didn't know what to do at this point to increase participation rates since they had done so much already. These summary judgments were not stated in a defeated tone but in more of a tone of resignation to the simple realization that it might not be possible to achieve the very high participation rates that were desired. Since this is a pilot project, such information is important for the future. Setting realistic expectations for participation will be important for future participants so they understand that a lot of work will be required to promote the program but participation rates above 25% of a student body might represent superior participation. But as has been mentioned before, the ICfL should discuss the cost/benefit ratio of this program. In other words, for the dollars spent are participation rates high enough? And for future program participants, what are minimum acceptable participation rates? The data which follows might inform those conversations.

Second, the number of public school library visits varied across sites. Two of the full implementation schools had 23% and 24% of their 1<sup>st</sup>-3<sup>rd</sup> graders visit the library but the other full implementation site had 11%. The two partial implementation sites had 4% and 13% participation of 1<sup>st</sup>-3<sup>rd</sup> graders. It appears that full implementation coupled with aggressive and extensive promotion can result in nearly a quarter of 1<sup>st</sup>-3<sup>rd</sup> graders visiting the library. It, again, will be up to the ICfL and the participating schools to decide whether this response rate is high enough given the outlay of resources to achieve it.

Average weekly student visits to the school library and total book circulation varied across sites. Two of the full implementation sites and one of the partial averaged about 49 students visiting the library per week from all grade levels. One of these libraries, a full implementation site, had a total circulation during the summer of 3,418 books while the other two had total circulations of 470 and 498 books. The third full implementation site did not provide this data. The other partial implementation site averaged about five student visits per week and circulated a total of 281 books. What adequate circulation should be is hard to judge, but this data reveals that quite large check out volumes are possible so setting reasonable expectations for future participants should be a priority.

The full implementation sites consistently reported that the 10 books received by the children were of high quality, appropriately leveled, and contained appropriate content. One commented that because there were fewer higher level chapter books in the mix of books during 2015 when compared to 2014 and more nonfiction, the books better fit their target audience.

And finally, the librarian was telephoned at the full implementation site that circulated over 3,000 books and had one of the highest participation rates. Because of this strong relative performance, it was deemed important to gather information about these successes. The librarian was candid and said that she really didn't have definitive reasons for their successes. She also said that she had talked with teachers in the school about the successes and the teachers did not have definitive reasons. But as she shared during the conversation some things that might have been causative agents emerged. The school did an all-out push to advertise and promote the program both in the spring before it began and then throughout the summer. Following are the specific things the librarian mentioned concerning efforts to increase and sustain summer library participation. All of the following were new efforts for 2015:

- Automated call-out each week by principal;
- Posted an announcement about the program on school's Facebook page;
- Posted an announcement on the school's web site;
- Sent Twitter announcements; and
- Offered raffle prizes (baskets containing things students and families liked or needed)—students received raffle tickets when they attended library and checked out books.

When the school's relatively high check out rates were discussed, the librarian mentioned that, although she did not know why, most students during summer 2015 brought back all of their read and return books and chose more to take home each week than they had during 2014. She also reported that she had her regular collection available like the first year of the program (i.e., 2014), and she did not limit the number of regular collection books students could check out. During the school year students usually have a limit of four books, but during the summer they could check out as many as they wanted, and they did so quite regularly.

### **Idaho Reading Indicator Results: Spring to Fall**

Idaho has required the administration of the Idaho Reading Indicator (IRI) for the past 15 years. It is a brief (less than 10 minute) early literacy screener administered to kindergarten through 3<sup>rd</sup> grade students at least twice each year. In the fall of kindergarten, students are tested on letter naming fluency (LNF), although they are also given a screener on letter sound fluency (LSF) at this time. During spring of kindergarten, students are given the letter sound fluency screener. During fall of 1<sup>st</sup> grade, the letter sound fluency screener is again given along with a reading curriculum based measure (RCBM). The RCBM is a reading rate measure where students are given three separate passages to read one at a time. Students are given one minute to read each passage and the median number of words read correctly is the recorded score. The RCBM is the only measure given in the spring of 1<sup>st</sup> grade and is the only measure given fall and spring of 2<sup>nd</sup> and 3<sup>rd</sup> grades.

For the purposes of the *Stop the Summer Slide Pilot Project* program evaluation, changes in performance from spring to fall, that is across the summer months, was of interest. Thus, the change in IRI spring and fall scores for individual students was the unit of analysis. All five schools participating in the pilot project were asked to submit spring and fall IRI scores for all students who were in grades K-2 during the spring. Even though the IRI is administered to grade 3 students, they were not included in the evaluation design because students who were in grade 3 during spring move to grade 4 in the fall where the IRI is no longer administered. Schools were also asked to mark those students in the data set who participated in their summer open library hours. All data sets were stripped of student names, addresses, and other identifying information prior to being sent to the program evaluator. Thus, there was no possibility of breaching confidentiality requirements.

All five schools submitted data, and although all schools were provided a template to follow for organizing their data, variations in what was provided occurred. All schools were asked to provide student demographic data including gender, ethnicity, Limited English Proficiency

(LEP) status, special education services status, and free or reduced price lunch status. Only one school submitted all of these variables so the ability to analyze subgroups in the data or to compare subgroups across schools is limited. Results for individual schools will be provided first followed by aggregate analyses. One important reason for reporting individual school results stems from the five sites operationalizing the *Stop the Summer Slide Pilot* in different ways. The variability across sites was expected and welcomed since this is a pilot project and sites were urged to experiment with the program and make it their own. Recall that two hypotheses were posited concerning student IRI performance. The first was that students within a school participating in summer public school library hours would have less loss than those not participating. The second hypothesis was that those students receiving 10 books would have less loss than those receiving just one. Please note that this is the second year of the pilot project and IRI data has been collected both years so where possible both years of data are provided for comparative purposes. The first hypothesis will be explored followed by the second.

**Hypothesis #1: School #1 (Full implementation)**

School #1 was a full implementation school. This school provided gender, ethnicity, and LEP status. Thus some limited displays of demographic characteristics of the overall student body compared to the group who participated in summer library hours are possible. Table 5 provides these comparisons.

Table 5: Comparison of Demographic Variables Between Participants and Nonparticipants: Percentages

| Grade Spring  | Gender   |    |            |    | Ethnicity  |    |              |    | Language Status |    |         |    |
|---|----------|----|------------|----|------------|----|--------------|----|-----------------|----|---------|----|
|   | Female-P |    | Female-Non |    | Hispanic-P |    | Hispanic-Non |    | LEP-P           |    | LEP-Non |    |
| Year →  | 14       | 15 | 14         | 15 | 14         | 15 | 14           | 15 | 14              | 15 | 14      | 15 |
| K (2014: P: n=25, Non: n=151; 2015: P: n=41, Non: n=111)* | 68       | 61 | 48         | 42 | 40         | 63 | 60           | 48 | 40              | 29 | 46      | 14 |
| 1 (2014: P: n=28; Non: n=117; 2015: P: n=28, Non: n=125)  | 57       | 54 | 43         | 51 | 54         | 71 | 54           | 57 | 14              | 32 | 22      | 29 |
| 2 (2014: P: n=22, Non: n=154; 2015: P: n=23, Non: n=142)  | 55       | 65 | 42         | 43 | 36         | 61 | 48           | 57 | 0               | 30 | 8       | 22 |

\* P=student participants. Non=students who didn't participate.

A diversity of students participated in the program. This is a positive finding for this school since it shows that all demographic groups will participate when provided the opportunity. Except for 1<sup>st</sup> grade, considerably more females than males participated. If this finding holds in subsequent years, then teachers, librarians, and parents/caregivers need to be made aware of this and conversations need to occur about why it happens and what might be done to stimulate more

male participation. Hispanic participants increased dramatically between 2014 and 2015. During 2014 the percentage of Hispanic participants was equal to or lower than the percentage of Hispanics in the non-participant population, but during 2015 Hispanic participation rates dramatically improved resulting in higher percentages of Hispanics in the participation group than in the non-participant population. Of additional importance is the similar shift in Limited English Proficiency participation rates. During 2014 the percentages of LEP students in the participant group were all lower than the percentages of LEP students in the non-participant group, but this pattern reversed during 2015. At all grade levels, the percentage of LEP students in the participant group was higher than the percentage of LEP students in the non-participants. Because of these positive trends, the librarian at School #1 was contacted via telephone and asked if she knew why these shifts might have occurred. She did not know any specific reasons. She also said that she had asked the teachers for insights and they did not know either. More details about this conversation were provided earlier in the report, and some of the promotional activities listed there that were undertaken during the spring before the program started and then during the summer might be causative agents of the participation increases. If these positive trends hold in the future, it might be a good use of resources to more systematically explore what this particular school does that stimulates normally under-represented populations to participate at such high relative rates.

Table 6 provides summer reading rate drops as measured by the IRI between participants and non-participants by grade level.

Table 6: IRI Raw Score Means and Mean Changes: Spring 2015 to Fall 2015 by Grade Level

| Grade                           | Participant Group |                |                 | Non-participant Group |                |                 |
|---------------------------------|-------------------|----------------|-----------------|-----------------------|----------------|-----------------|
|                                 | Spr 2015          | Fall 2015      | Mean Change     | Spr 2015              | Fall 2015      | Mean Change     |
| <b>K (P: n=41; Non: n=111)*</b> | 46.6**<br>(21.9)  | 37.5<br>(18.1) | -9.1<br>(11.3)  | 48.7<br>(17.5)        | 36.0<br>(16.4) | -12.7<br>(11.2) |
| <b>1 (P: n=28; Non: n=125)</b>  | 62.3<br>(36.0)    | 51.2<br>(36.8) | -11.1<br>(13.3) | 59.7<br>(32.7)        | 48.1<br>(30.7) | -11.6<br>(13.0) |
| <b>2 (P: n=23; Non: n=141)</b>  | 101.0<br>(44.5)   | 79.5<br>(41.1) | -21.5<br>(10.5) | 101.8<br>(38.5)       | 82.2<br>(32.5) | -19.6<br>(15.6) |

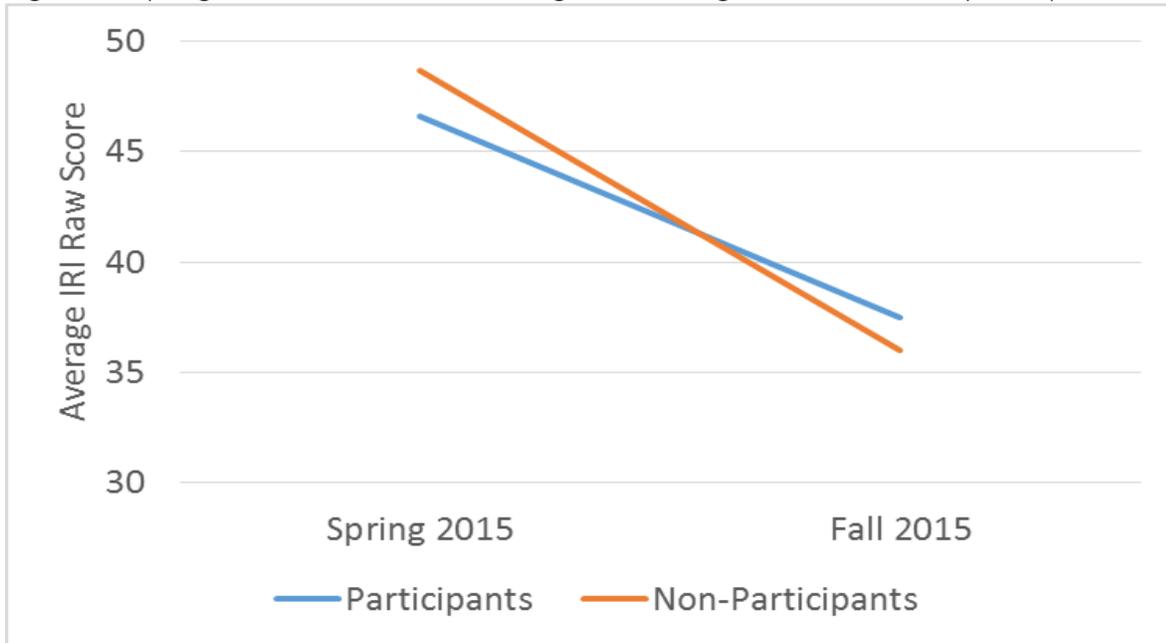
\* P=student participants. Non=students who didn't participate.

\*\* Means outside ( ). Standard deviations inside ( ).

Using Repeated Measures Analysis of Variance, no statistically significant differences occurred between participant and non-participant groups for 1<sup>st</sup> and 2<sup>nd</sup> grade, but there were differences at the p<.10 level for kindergarten (F=2.99; df=1/150; p=.086). Kindergarten participants had less drop over the summer than non-participants (See Figure 7). Please recall that the participant group had higher percentages of females, Hispanics and Limited English Proficiency students than what was found in the non-participant group. These differences could account for some or all of the difference in summer loss, but such doesn't appear to be the case. For example, primary grade females are historically stronger readers than males so the greater percentage of female participants might be the cause of the better performance in that group. But additional analyses showed this to probably not be the case. The 25 females in the

participant group dropped an average of 9.7 (sd=11.2) while males in this group dropped slightly less at 8.3 (sd=11.8), so female participants did not “prop up” scores from spring to fall. A matter of fact, the same pattern held in the non-participant group where females dropped an average of 13.9 (10.1) compared to males who dropped an average of 11.8 (sd=11.9). Additionally, the non-participant group had a slightly higher mean score spring 2015 than did the participant group, so the participant group as a whole did not exit kindergarten at higher levels of reading proficiency. Higher levels of proficiency would predict less summer loss. And finally, recall that the participant group had higher percentages of Hispanic and LEP students. Both of these groups are historically less proficient readers and thus experience greater summer loss, but just the opposite occurred at this particular full implementation school for kindergarteners. The kindergarten participant group experienced less loss. It is important to note that this school had much higher total circulation over the summer than any other site. Although it cannot be said that the higher circulation rates caused the lower summer loss in kindergarteners, it is an important relationship that should be more extensively studied in the future.

Figure 7: Spring 2015 and Fall 2015 Kindergarten Average Raw IRI Scores by Group



In summary, hypothesis #1 stated that students within a school participating in school library hours during the summer would have less loss than those not participating. This hypothesis was supported in School #1 for kindergarteners but not for 1<sup>st</sup> and 2<sup>nd</sup> graders.

It is also important to examine the change in magnitude of summer loss over time. Is it becoming less, more, or remaining the same. Table 7 provides results exploring this question.

Table 7: Mean Loss by Grade Level and Year

| Grade | Participants  |              | Non-Participants |               |
|-------|---------------|--------------|------------------|---------------|
|       | 2014          | 2015         | 2014             | 2015          |
| K     | 16 (13) n=24* | 9 (11) n=41  | 15 (13) n=130    | 13 (11) n=111 |
| 1     | 13 (13) n=27  | 11 (13) n=28 | 16 (13) n=125    | 12 (13) n=125 |
| 2     | 25 (15) n=22  | 21 (10) n=23 | 25 (15) n=143    | 20 (16) n=141 |

\* Means outside ( ). Standard deviations inside ( ). n=number of students in calculation.

Two years of data does not establish a trend, but it is important to note that at all grade levels, and no matter whether the students were participants or not, summer loss decreased year-over-year. These are not dramatic decreases in summer loss and some or all of them could be due to random fluctuations that occur in data or because of different cohorts of students moving through the grade levels, but if these trends continue during upcoming years, these small changes will accumulate and become substantial reductions in summer loss. Thus, these trends should be monitored in the future.

**Hypothesis #1: School #2 (Full Implementation)**

This full implementation school provided IRI data but no demographic data for the students. Additionally grade levels were not provided for those students who participated in summer library hours at the school, but grade levels were provided for student who did not participate. Thus, only limited analyses are possible.

Because the spring kindergarten and fall 1<sup>st</sup> grade IRI employ the same Letter Sound Fluency assessment and no other grade levels do this, kindergarten scores were identifiable in the data set and thus participants and non-participants can be directly compared. Grade levels, however, cannot be determined for all of the other students in the data set because after fall 1<sup>st</sup> grade the IRI uses the same assessment until end of 3<sup>rd</sup> grade. Thus, Table 8 provides spring and fall means and mean changes for kindergarten and the other grades combined.

Table 8: IRI Raw Score Means and Mean Changes: Spring 2015 to Fall 2015 by Grade Level

| Grade                      | Participant Group |                 |                 | Non-participant Group |                |                 |
|----------------------------|-------------------|-----------------|-----------------|-----------------------|----------------|-----------------|
|                            | Spr 2015          | Fall 2015       | Mean Change     | Spr 2015              | Fall 2015      | Mean Change     |
| K (P: n=22; Non: n=27)*    | 58.6**<br>(16.8)  | 42.1<br>(13.3)  | -16.5<br>(16.8) | 50.0<br>(12.6)        | 37.1<br>(14.9) | -13.1<br>(12.1) |
| 1 & 2 (P: n=40; Non: n=88) | 125.1<br>(55.3)   | 107.2<br>(50.4) | -17.9<br>(14.7) | 90.9<br>(48.2)        | 75.9<br>(46.3) | -15.0<br>(17.0) |

\* P=student participants. Non=students who didn't participate.

\*\* Means outside ( ). Standard deviations inside ( ).

There are no statistically significant differences in mean change scores between participants and non-participants at either kindergarten or the other combined grade levels. This means that participants and non-participants dropped the same amounts over the summer. Something of

note is the large difference in spring scores between the participants and non-participants. At both kindergarten and the other combined grade levels, participants in the spring exhibited higher average levels of performance on the IRI than did non-participants. What this might indicate is that the students being drawn to the summer library hours are those students who are more able readers. The less able are not participating as much. This did not appear to be the case with School #1 where spring scores for the two groups were quite similar. Thus, School #2 might consider actively recruiting less able readers to attend summer library hours.

It is also important to examine the change in magnitude of summer loss over time. Is it becoming less, more, or remaining the same. Regrettably this variable cannot be explored for Full Implementation School #2 because the data provided during 2014 was not in a form where average summer loss statistics could be calculated. Perhaps this data could be requested from the school so that a table similar to Table 7 above could be generated.

**Hypothesis #1: School #3 (Full Implementation)**

School #3 was a full implementation school. This school provided gender but no other demographic data. Thus some limited displays of demographic characteristics of the overall student body compared to the group who participated in summer library hours are possible. Also, this full implementation school provided data during 2014 but the data was ultimately not usable because of errors and omissions. Thus only limited information can be provided for School #3. Table 9 provides the gender make up of participants and non-participants for 2015.

Table 9: Comparison of Demographic Variables Between Participants and Nonparticipants: Percentages

| Grade Spring                  | Gender   |    |            |    |
|-------------------------------|----------|----|------------|----|
|                               | Female-P |    | Female-Non |    |
| Year →                        | 14       | 15 | 14         | 15 |
| K (2015: P: n=13, Non: n=79)* | n/a      | 54 | n/a        | 41 |
| 1 (2015: P: n=12; Non: n=61)  | n/a      | 58 | n/a        | 41 |
| 2 (2015: P: n=6, Non: n=68)   | n/a      | 67 | n/a        | 52 |

\* P=student participants. Non=students who didn't participate.

At all grade levels participant groups contained higher percentages of females than males. This was not as pronounced in kindergarten and 1<sup>st</sup> grade but at 2<sup>nd</sup> grade two thirds of participants were females, only one third were males. In the future, this school might consider implementing recruitment efforts targeted at 2<sup>nd</sup> grade males.

Table 10 provides summer reading rate drops as measured by the IRI between participants and non-participants by grade level.

Table 10: IRI Raw Score Means and Mean Changes: Spring 2015 to Fall 2015 by Grade Level

| Grade                   | Participant Group |                 |                 | Non-participant Group |                |                |
|-------------------------|-------------------|-----------------|-----------------|-----------------------|----------------|----------------|
|                         | Spr 2015          | Fall 2015       | Mean Change     | Spr 2015              | Fall 2015      | Mean Change    |
| K (P: n=13; Non: n=79)* | 34.4**<br>(18.8)  | 31.5<br>(11.9)  | -2.9<br>(10.9)  | 29.9<br>(14.2)        | 29.5<br>(12.9) | -.33<br>(8.9)  |
| 1 (P: n=12; Non: n=61)  | 52.6<br>(33.8)    | 54.9<br>(39.6)  | 2.3<br>(12.2)   | 65.2<br>(34.4)        | 67.3<br>(34.1) | 2.1<br>(13.9)  |
| 2 (P: n=6; Non: n=68)   | 129.3<br>(42.6)   | 114.2<br>(41.9) | -15.1<br>(10.8) | 101.0<br>(39.3)       | 94.6<br>(36.2) | -6.4<br>(14.4) |

\* P=student participants. Non=students who didn't participate.

\*\* Means outside ( ). Standard deviations inside ( ).

Using Repeated Measures ANOVA, there were no statistically significant differences between participant and non-participant groups. In other words, summer learning loss was equal across the two groups at all grade levels. For kindergarteners and 2<sup>nd</sup> graders, participants were higher performers than non-participants in the spring. For 1<sup>st</sup> graders the opposite was true with non-participants being the higher performers. This is interesting since recruiting lower proficiency readers for summer reading programs can sometimes be more difficult than recruiting higher proficiency readers. This school might want to explore why they were successful at recruiting these 2<sup>nd</sup> graders. There is another additional interesting result at the 2<sup>nd</sup> grade level. Both groups gained over the summer. These gains were not statistically significant but these small gains are interesting in that they go against the norm, which is loss over the summer. A matter of fact, losses at this school across the summer were relatively small. Only participant 2<sup>nd</sup> graders lost an appreciable amount. All others either lost negligible amounts or made gains. This held true for participants and non-participants alike. It is important to note that sample sizes for participants are quite small for this school so any statistics associated with these groups should be cautiously interpreted.

It is also important to examine the change in magnitude of summer loss over time. Is it becoming less, more, or remaining the same over the two years of the program. Regrettably these statistics could not be computed for this school since 2014 data were not usable.

**Hypothesis #1: School #4 (Partial Implementation)**

School #4 was a partial implementation site. The school provided grade, gender, ethnicity, and LEP status for each student both years of the program. Table 11 provides demographic comparisons between participant and non-participant groups, but some data for participants is missing. Kindergarten is missing data because only four of 106 2015 kindergarteners and seven of 125 2014 kindergarteners participated in summer library hours. First and 2<sup>nd</sup> grade are missing data for similar reasons. These participant groups are too small to derive valid and reliable descriptive statistics.

Table 11: Comparison of demographic variables between participants and nonparticipants: Percentages

| Grade Spring  | Gender   |    |            |    | Ethnicity  |    |              |    | Language Status |    |         |    |
|---|----------|----|------------|----|------------|----|--------------|----|-----------------|----|---------|----|
|   | Female-P |    | Female-Non |    | Hispanic-P |    | Hispanic-Non |    | LEP-P           |    | LEP-Non |    |
| Year →  | 14       | 15 | 14         | 15 | 14         | 15 | 14           | 15 | 14              | 15 | 14      | 15 |
| K (2014: P: n=7, Non: n=125; 2015: P: n=4, Non: n=106)* | na       | na | 49         | 52 | na         | na | 26           | 30 | na              | na | 12      | 11 |
| 1 (2014: P: n=8; Non: n=160; 2015: P: n=5, Non: n=107)  | na       | na | 54         | 52 | na         | na | 31           | 25 | na              | na | 15      | 13 |
| 2 (2014: P: n=11, Non: n=132; 2015: P: n=7, Non: n=134) | na       | na | 50         | 49 | na         | na | 38           | 37 | na              | na | 17      | 19 |

\* P=student participants. Non=students who didn't participate.

Since only non-participant group statistics could be validly derived, table 11 essentially provides a demographic profile of the K-2 students in the school. Gender is relatively balanced, approximately 30% of the primary grade students are Hispanic, and roughly 15% are LEP.

Table 12 provides changes in mean scores between spring and fall for the non-participant group only. Once again, the participant groups were too small to derive valid descriptive statistics.

Table 12: IRI Raw Score Means and Mean Changes: Spring 2015 to Fall 2015 by Grade Level

| Grade                   | Participant Group |           |             | Non-participant Group |                |                 |
|-------------------------|-------------------|-----------|-------------|-----------------------|----------------|-----------------|
|                         | Spr 2015          | Fall 2015 | Mean Change | Spr 2015              | Fall 2015      | Mean Change     |
| K (P: n=4; Non: n=102)* | na**              | na        | na          | 41.0<br>(16.4)        | 33.9<br>(15.5) | -7.1<br>(10.1)  |
| 1 (P: n=7; Non: n=107)  | na                | na        | na          | 70.1<br>(37.5)        | 56.8<br>(39.4) | -13.3<br>(12.8) |
| 2 (P: n=8; Non: n=134)  | na                | na        | na          | 91.6<br>(41.2)        | 74.8<br>(38.2) | -16.8<br>(21.1) |

\* P=student participants. Non=students who didn't participate.

\*\* Means outside ( ). Standard deviations inside ( ).

The drop in kindergarten was lower than in the other schools previously discussed. These statistics will probably vary quite a bit year-to-year, but if this lower value holds over time, it will become important to ascertain why this particular school's kindergarteners manifest lower rates of summer loss.

It is also important to examine the change in magnitude of summer loss over time. Is it becoming less, more, or remaining the same. Table 13 provides results exploring this question, and as before participant groups were too small to include in the table.

Table 13: Mean Loss by Grade Level and Year

| Grade | Participants |      | Non-Participants |               |
|-------|--------------|------|------------------|---------------|
|       | 2014         | 2015 | 2014             | 2015          |
| K     | na           | na   | 15 (11) n=106    | 7 (10) n=102  |
| 1     | na           | na   | 15 (11) n=139    | 13 (13) n=107 |
| 2     | na           | na   | 18 (14) n=117    | 17 (21) n=134 |

\*\* Means outside ( ). Standard deviations inside ( ). n=number of students in calculation.

Two years of data does not establish a trend, but it is important to note that at all grade levels summer loss decreased year-over-year. A quite dramatic decrease occurred at the kindergarten level but only very small decreases occurred in 1<sup>st</sup> and 2<sup>nd</sup> grade. The 1<sup>st</sup> and 2<sup>nd</sup> grade changes could easily be due to random fluctuations in the data or differences in cohorts. The same could be said for the kindergarten decrease but its magnitude is large enough that there is greater probability that it is a meaningful change. Additional years of data should be collected to better establish whether changes are actually occurring, and just as importantly whether the trends are stronger in full implementation schools compared to those found in partial implementation schools.

**Hypothesis #1: School #5 (Partial Implementation)**

School #5 was a partial implementation school. The school provided grade, gender, ethnicity, LEP status, and meal status for each student both years of the program. Table 14 provides demographic comparisons between participant and non-participant groups.

Table 14: Comparison of Demographic Variables Between Participants and Nonparticipants: Percentages

| Grade Spring  | Gender   |    |            |    | Ethnicity |    |           |    | Language Status |    |         |    | Meal Status |       |         |     |
|---|----------|----|------------|----|-----------|----|-----------|----|-----------------|----|---------|----|-------------|-------|---------|-----|
|   | Female-P |    | Female-Non |    | Hisp.-P   |    | Hisp.-Non |    | LEP-P           |    | LEP-Non |    | F/R-P       |       | F/R-Non |     |
| Year →  | 14       | 15 | 14         | 15 | 14        | 15 | 14        | 15 | 14              | 15 | 14      | 15 | 14          | 15    | 14      | 15  |
| K (2014 P: n=13; Non: n=73; 2015 P: n=13; Non: n=52)* | 69       | 39 | 53         | 58 | 23        | 15 | 54        | 42 | 0               | 0  | 34      | 29 | 54          | 100** | 49      | 100 |
| 1 (2014 P: n=13; Non: n=57; 2015 P: n=19; Non: n=64)  | 39       | 63 | 51         | 52 | 23        | 16 | 58        | 53 | 8               | 0  | 39      | 42 | 54          | 100   | 89      | 100 |
| 2 (2014 P: n=18; Non: n=72; 2015 P: n=16; Non: n=62)  | 44       | 44 | 58         | 53 | 39        | 31 | 56        | 68 | 17              | 6  | 29      | 47 | 61          | 100   | 81      | 100 |

\* P=student participants. Non=students who didn't participate.

\*\* All 2015 students were labeled as qualifying for free or reduced price lunch.

Participant groups were different from non-participant groups. Gender composition of the participants varied across years and grade levels with males being predominant at some points and females at others. Hispanic and LEP students were significantly under-represented in the participant groups both years. Because of these differences between participant and non-participant groups, this library might consider additional efforts to recruit Hispanic and LEP students to participate in the summer open library hours. The library might also consider efforts to make sure gender representation in the participant groups reflects the gender profile of the underlying class of students. Not much can be said concerning meal status. For 2015 all students were identified as qualifying for free or reduced price meals thus obviating comparisons between participant and non-participant groups and across years.

Table 15 provides means for spring and fall IRI scores and mean summer reading rate drops between participants and non-participants by grade level.

Table 15: IRI Raw Score Means and Mean Changes: Spring 2015 to Fall 2015 by Grade Level

| Grade                   | Participant Group |                 |                 | Non-participant Group |                |                 |
|-------------------------|-------------------|-----------------|-----------------|-----------------------|----------------|-----------------|
|                         | Spr 2015          | Fall 2015       | Mean Change     | Spr 2015              | Fall 2015      | Mean Change     |
| K (P: n=13; Non: n=52)* | 67.9**<br>(23.2)  | 49.3<br>(16.7)  | -18.5<br>(16.2) | 58.2<br>(18.5)        | 44.0<br>(15.4) | -14.1<br>(12.5) |
| 1 (P: n=19; Non: n=64)  | 96.2<br>(39.0)    | 83.5<br>(40.9)  | -12.7<br>(17.4) | 68.4<br>(32.2)        | 51.9<br>(33.4) | -16.5<br>(14.1) |
| 2 (P: n=16; Non: n=62)  | 123.7<br>(46.9)   | 111.8<br>(53.9) | -11.9<br>(20.1) | 94.1<br>(47.8)        | 83.7<br>(46.6) | -10.4<br>(13.6) |

\* P=student participants. Non=students who didn't participate.

\*\* Means outside ( ). Standard deviations inside ( ).

At all grade levels students who participated were much higher performers in the spring compared to non-participants. What this probably means is that the better readers were drawn to the open summer library hours. In the future, this school might consider more active recruiting of lower performing readers. Of course, this should not be done at the expense of the higher performers. Instead, the goal should be to get all readers, no matter their spring performance level, to participate. Concerning summer reading loss, kindergarten and 2<sup>nd</sup> grade participants dropped more over the summer than did their non-participant counterparts, although the difference in drop at the 2<sup>nd</sup> grade level was only 1.5 points. Participant 1<sup>st</sup> graders dropped less than non-participants. In short, no pattern in summer loss favoring one group over the other emerged. Although mean change scores varied between participants and non-participants by grade level, repeated measures ANOVA's for each grade level revealed no statistically significant differences between participants and non-participants. But as has been emphasized before, sample sizes for the participant groups are quite small which limits the power of inferential statistics. As more data is collected in future years, power will increase as sample sizes do.

It is also important to examine the change in magnitude of summer loss over time. Is it becoming less, more, or remaining the same. Table 16 provides results exploring this question.

Table 16: Mean Loss by Grade Level and Year

| Grade | Participants |              | Non-Participants |              |
|-------|--------------|--------------|------------------|--------------|
|       | 2014         | 2015         | 2014             | 2015         |
| K     | 9 (9) n=13   | 19 (16) n=13 | 14 (10) n=69     | 14 (13) n=52 |
| 1     | 25 (11) n=13 | 13 (17) n=19 | 15 (16) n=56     | 17 (14) n=64 |
| 2     | 17 (20) n=18 | 12 (20) n=16 | 19 (14) n=67     | 10 (14) n=62 |

\* Means outside ( ). Standard deviations inside ( ). n=number of students in calculation.

Two years of data does not establish a trend and the small participant sample sizes can create high year-over-year variability in these statistics, so not a lot can be concluded at this time except that more years of data are needed with larger participant samples. Taking the data in table 16 as an incomplete snapshot, however, reveals a variety of outcomes. Kindergarten participant mean loss more than doubled between 2014 and 2015 while 1<sup>st</sup> grade participant mean loss dropped by nearly half across the two years. On the non-participant side, kindergarten mean loss remained the same while 1<sup>st</sup> grade mean loss increased a small amount and 2<sup>nd</sup> grade mean loss dropped by nearly half. In short, these statistics show no conclusive trends and the differences that are revealed might be due to sampling, differential cohort performance, and also inherent instability in the IRI. Only additional data from larger samples will provide a clearer picture.

## Hypothesis #2: Comparison of Full Implementation to Partial Implementation Schools

Please recall that the second hypothesis stated that full implementation schools would have lower rates of summer loss when compared to partial implementation schools. Thus, the three full implementation schools discussed above were compared to the two partial implementation school discussed above. Table 17 summarizes the mean change scores spring to fall by school and grade level.

Table 17: Mean Change Scores Spring 2015 to Fall 2015 by School and Grade Level

| School | Grade          |       |              |       |              |       |
|--------|----------------|-------|--------------|-------|--------------|-------|
|        | K              |       | 1            |       | 2            |       |
| FI #1* | -11.7 (11.3)** | n=152 | -11.5 (13.0) | n=153 | -19.9 (15.0) | n=164 |
| FI #2  | -14.5 (14.6)   | n=47  | -9.3 (13.1)  | n=41  | -20.1 (18.5) | n=47  |
| FI #3  | -.70 (9.2)     | n=92  | 2.2 (13.6)   | n=73  | -7.0 (14.3)  | n=74  |
| PI #4  | -7.2 (9.9)     | n=106 | -13.1 (12.7) | n=114 | -17.3 (20.9) | n=142 |
| PI #5  | -15.0 (13.3)   | n=65  | -15.7 (14.9) | n=83  | -10.7 (15.0) | n=78  |

\* FI=Full Implementation School and PI=Partial Implementation School. Numbers for the schools correspond to the numbers used previously in this report.

\*\* Means outside ( ). Standard deviations inside ( ). n=number of students in calculation.

To analyze the mean change scores, the full implementation schools were grouped together and the partial implementation schools were grouped together at each grade level. Thus a mean

score could be derived for full implementation schools and a mean score could be derived for partial implementation schools at each grade. These means were compared using an independent samples t test. Results are found in Table 18.

Table 18: Independent Samples t test of Combined Full Implementation Schools and Partial Implementation School by Grade Level

| Grade | FI Combined Mean*   | PI Combined School Mean | T Test***              |
|-------|---------------------|-------------------------|------------------------|
| K     | -8.7 (12.5) n=291** | -10.1 (11.9) n=171      | t=1.22; df=460; p=.22  |
| 1     | -7.4 (14.4) n=267   | -14.2 (13.7) n=197      | t=5.10; df=462; p=.000 |
| 2     | -16.6 (16.4) n=285  | -15.0 (19.2) n=220      | t=-1.03; df=503; p=.30 |

\* FI=Full Implementation School and PI=Partial Implementation School.

\*\* Means outside ( ). Standard deviations inside ( ). n=number of students in calculation.

\*\*\* Equal variances assumed.

The only statistically significant difference between the combined full implementation schools and the combined partial implementation schools was in kindergarten where the summer loss for full implementation schools was roughly half that of partial implementation schools. This is a strongly positive finding and provides evidence that for kindergarteners transitioning into 1<sup>st</sup> grade receiving eight books at the end of the school year and then two in the mail during the summer results in less summer loss. At the other two grade levels, the differences were not statistically significant, meaning the schools experienced the same amounts of loss no matter the level of implementation.

### Summary and Recommendations

Concerning amounts of reading over the summer and other reading-related behaviors such as visiting the library, there was a bias in favor of full implementation schools when compared to the partial implementation schools. On a number of these variables, full implementation schools had slightly higher amounts or rates, and some of the differences were great enough to achieve statistical significance. For example, full implementation schools had more school library visits, public library visits, and a greater number of parents/caregivers reporting their child reading more this summer than in the past. All of these are quite positive findings and are perhaps the beginnings of an emerging body of evidence showing more clearly what the full implementation model does and does not achieve. A third year of data will most likely make important contributions to this emerging picture.

Statistical analysis of IRI data revealed two interesting statistically significant findings, both of which were at the kindergarten level. At one full implementation school, kindergartners who participated in summer library hours dropped less over the summer than kindergartners who did not participate. And, when full implementation schools were combined together into a single group and partial implementation schools were also combined into a single group, kindergartners in full implementation schools dropped much less over the summer than kindergartners in partial implementation schools. This difference, however, was not found at the other grades. Perhaps this shows that the full implementation model needs to be adjusted for

each grade level. Only additional research in the future exploring such adjustments will provide answers.

A series of recommendations emerged from the evaluation study. These follow:

- Cost-benefit analyses should be undertaken, but these should probably be initiated after completion of the third year of program implementation. This recommendation is mentioned now instead of at the end of the third year so that the ICfL can begin discussing whether such analyses are needed and if it is decided that they are plans can be made for them;
- Schools exhibit substantial variance in program outcomes such as number of students visiting the school library and total books circulated during the summer. For current participants, this variance should be discussed and goals that take into account the unique setting that each school represents should be set for the third year of implementation;
- Full Implementation School #1 presents an interesting case that could be informative for the entire initiative. The school was quite successful at recruiting Hispanic and LEP students to attend summer library hours. This was also the school that achieved the significant difference between kindergarteners who attended summer library hours and those who did not on the IRI. And this school also achieved extremely high total circulation rates when compared to the other schools. The ICfL might consider a follow-up study with this school to glean details about why some of these things occurred; and
- Trends in summer loss should be monitored over time. Small reductions each year could accumulate into quite meaningful aggregate amounts. There is emerging evidence that small reductions in summer loss are occurring at these schools so continued monitoring is essential.

#### Sources Cited

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