

SUMMER READING PROGRAM IMPACT  
ON STUDENT READING ABILITY  
*A Report to the Williamsburg Regional Library*

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## ABOUT THE CENTER FOR SUMMER LEARNING

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The Center for Summer Learning's mission is to create opportunities for high-quality summer learning for all young people. Based at the Johns Hopkins University, the Center is committed to expanding summer learning opportunities for disadvantaged children and youth as a strategy for closing the achievement gap. The Center works to:

- Improve the quality and availability of summer programs by providing professional development and evaluation services to providers.
- Build awareness and support for high-quality summer learning programs through outreach and communications.
- Generate increased public investment in summer programs for young people in high-poverty communities.

Through its national network of providers and partners, the Center works to make summer learning a priority in communities across the country. Using research-based approaches and models of effective practice, the Center strives to ensure that all children have access to high-quality learning opportunities during the summer months.

## ABOUT THE WILLIAMSBURG REGIONAL LIBRARY

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Founded almost 100 years ago, the Williamsburg Regional Library in Hampton Roads, Virginia, serves the City of Williamsburg, James City County, and Upper York County, which has a combined population of approximately 85,000 residents. The library, consisting of two buildings and mobile library services outreach vehicles, is well used and respected for its collections, public service, and award winning programs. In general, the community is affluent and well-educated. However, there are pockets of poverty in both the city and the counties. In recent years the community has seen a significant growth of non-English speaking residents.

The summer reading program takes place annually at the facilities of the Williamsburg Regional Library (WRL). This program serves 12 elementary schools and a significant number of home schooled children. In 2006, 3,452 children registered for the summer reading program and 2,942 children completed the program. In the Commonwealth of Virginia the average participation in public library summer reading programs is 13%. Out of all of the children who were eligible to participate in the WRL's summer reading program, 32% elected to do so. The summer reading program directly relates to both the library's mission and its strategic plan.

The mission of the Williamsburg Regional Library includes this statement: "Free access to information is a foundation of democracy. The Williamsburg Regional Library, a basic government service, provides that access through resources and programs that educate, enrich, entertain, and inform every member of our community."

The 2006-2010 Strategic Plan includes the following:

“We value a literate community. Literacy is important to the successful functioning of a democratic society. The Williamsburg Regional Library promotes lifelong literacy through collections, programs, services, and cooperative ventures with community partners.”

This is supported by the following Strategic Directions:

1. Focus on books and reading
2. Offer programs that promote lifelong literacy and further the library’s role as a community center

## INTRODUCTION

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For most public libraries, including Williamsburg Regional Library, summer reading programs represent a significant use of resources. While past research indicated that children who participate in summer reading programs retain their reading skills better than those who do not, very little has been done in recent years. For several years the library investigated the possibility of studying its reading program and evaluating its effectiveness. Librarians and teachers intuitively felt the programs had value in retaining reading skills, but more substantive proof was desirable.

Several things converged to make this study feasible. Two elementary schools agreed to collaborate with the library. This was critical to provide the testing needed for student assessment. The library contracted with the Center for Summer Learning to provide the analysis for the study. While both the Center and WRL knew this would be a small study, it would provide specific information about this reading program, and it would become part of the steadily accumulating, but recent, research on the effect a library summer reading program can have on a young person's reading ability and attitudes toward books and reading.

Due to the small size of the study population, the reader should look at the results with caution. We urge the reader to keep the small sample in mind and to interpret the results of this study in concert with recent and other forthcoming studies.

Since the 1970s, studies have suggested that summer reading is an effective way to prevent summer learning loss. In the landmark study, "Summer Learning and the Effects of Schooling," Barbara Heyns followed sixth and seventh graders in the Atlanta

public schools through two school years and the intervening summer and compared scores on reading pre-tests and post-tests. Heyns concluded that, “The single summer activity that is most strongly and consistently related to summer learning is reading.” In her study, Heyns also stated that, “More than any other public institution, including the schools, the public library contributed to the intellectual growth of children during the summer. Moreover, unlike summer school programs, the library was used by over half the sample and attracted children from diverse backgrounds.”<sup>1</sup>

The goal of this study is to examine the impact of a summer library reading program on the reading ability of rising second and fifth graders. While previous research, such as that done by Heyns in 1978, found that library summer reading programs can positively impact young peoples’ reading ability, this study examines the impact of the Williamsburg Regional Library summer reading program on a group of young people in their community. As Heyns found, summer reading programs positively impact students’ reading ability. This positive impact extends beyond simply retaining the skills that they acquired over the school year. However, by engaging in literacy activities over the summer months, such as actively participating in a summer reading program, young people can continue developing reading ability.

In 2006, the summer reading program took place at the facilities of the Williamsburg Regional Library, which include two buildings and mobile library outreach services vehicles. The study participants came from two of the 12 local schools included in the program.

This study followed a small group of rising second and fifth graders in order to find out if this specific program positively impacted a student’s reading ability by enabling

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<sup>1</sup> Heyns, Barbara. "Summer Learning and the Effects of Schooling." Academic Press, 1978.

students to either: (1) maintain the literacy skills they had when school ended over the summer months or (2) to improve their reading ability over the summer months.

Participants were followed over the summer of 2006. To evaluate the impact of the summer reading program, the research team, composed of staff from both study partners, chose to address the following evaluation questions:

1. How many students sign-up, participate, and complete the summer reading program? What percentage of children who sign-up complete the program?
2. Are there any correlations between demographic factors (i.e. socio-economic status (SES)) and sign-up, participation, and completion rates?
3. Are incoming 2<sup>nd</sup> and 5<sup>th</sup> grade students who participate in the summer reading program more likely to exhibit changes in reading behavior than those who do not participate?
4. Are incoming 2<sup>nd</sup> and 5<sup>th</sup> grade students who participate in the summer reading program more likely to express positive attitudes about reading than those who do not participate?
5. Are incoming 2<sup>nd</sup> and 5<sup>th</sup> grade students who participate in the library's summer reading program more likely to score higher on reading achievement tests than those who do not participate?
6. Are incoming 2<sup>nd</sup> and 5<sup>th</sup> grade students who participate in the library's summer reading program and summer school more likely to score higher on reading achievement tests than those who do not participate?

Each evaluation question is answered individually in the Results section of this report.

## METHOD

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*Participants:* There were three (3) groups of study participants: (a) students in grades 2 and 5 during Fall 2006, who participated in the Williamsburg Regional Library's summer reading program; (b) parents of students in the study; and (c) reading teachers of these students. Each group will be described.

*Students:* The sixty-four (64) students in the study who participated in this summer reading program represent only a small portion of the total number of participants. These were students from the participating schools, for whom parental permission had been obtained, 56% ( $n = 36$ ) in grade 2 and 44% ( $n = 28$ ) in grade 5. At the end of the program 72% ( $n = 46$ ) reported checking out one or more books from the library and reading one or more books. These children were identified as summer reading program participants or SRP in Table 1. Eighteen children (28%) reported not checking out or reading any books from the library during the summer reading program. This group of students was identified as the comparison group who did not participate in the summer reading program. (These study participants are identified as No SRP in Table 1.) This evaluation explores correlations between the demographic factors of race, gender, and socio-economic status, and the extent of a young person's participation in the program.

Table 1

*Student Participation, Reported by Grade Level*

	<i>Grade 2</i>	<i>Grade 5</i>	<i>Total</i>
	<i>N (%)</i>	<i>N (%)</i>	<i>N (%)</i>
<b>SRP</b>	26 (56%)	20 (44%)	46 (72%)
<b>No SRP</b>	10 (55%)	8 (45%)	18 (28%)
<b>Total</b>	36 (56%)	28 (44%)	64 (100%)

Note: SRP: Summer Reading Program; No SRP: No Summer Reading Program

*Parents:* Parents of 39 children participated in the program. Table 2 presents parental participation by grade level. Some parents of children participating in the summer reading program chose not to join this study; therefore, this evaluation does not include those parents. This evaluation only reports results for participating children with signed parental permission.

Table 2

*Parent Participation, Reported by Grade Level*

	<i>Grade 2</i>	<i>Grade 5</i>	<i>Total</i>
	<i>N (%)</i>	<i>N (%)</i>	<i>N (%)</i>
<b>SRP</b>	18 (50%)	18 (50%)	36 (92%)
<b>No SRP</b>	0 (0%)	3 (100%)	3 (3%)
<b>Total</b>	18 (46%)	21 (54%)	39 (100%)

Note: SRP: Summer Reading Program; No SRP: No Summer Reading Program

*Teachers:* Teachers submitted ratings for 59 children who participated in the program. Table 3 presents teacher ratings submitted by grade level. Additional teacher

participation was noted for students, but this evaluation will only report total sum results for participating children with signed parental permission.

Table 3

*Teacher Ratings Submitted, Reported by Grade Level*

	<b><i>Grade 2</i></b>	<b><i>Grade 5</i></b>	<b><i>Total</i></b>
	<i>N (%)</i>	<i>N (%)</i>	<i>N (%)</i>
<b>SRP</b>	23 (53%)	20 (47%)	43 (73%)
<b>No SRP</b>	9 (56%)	7 (44%)	16 (27%)
<b>Total</b>	32 (54%)	27 (46%)	59 (100%)

Note: SRP: Summer Reading Program; No SRP: No Summer Reading Program

*Instruments:*

Three (3) survey instruments were used to evaluate this program: (a) Student Self-Report of Reading; (b) Parent Questionnaire of Student’s Reading Behaviors; and (c) Teacher Evaluation of Student Reading Skills, Behaviors, and Attitudes. The Stanford Reading Assessment was administered to participants. Each will be described.

*Student Self-Report of Reading:* This was a one-page, 13-item instrument that presented students with statements concerning school, reading, and the library. Students were asked to circle a likert-type rating that described how they perceived the statement applied to them. Response choices were “Not at all like me,” “A little like me,” and “A lot like me.” In order to protect each student’s privacy, the surveys were anonymous and did not contain any individually identifying information. Therefore, the survey findings cannot be divided by grade or program participation. See Appendix A for a copy of the Student Survey.

*Parent Questionnaire of Student's Reading Behaviors:* This survey was two pages long and contained 15 items. Parents were asked about their child's participation in summer school, summer reading habits, and other summer activities, as well as the child's reading skills/attitudes, and other academic preparation. All items were statements with likert-type responses. Individually identifiable information was provided to enable linkage across data files. See Appendix A for a copy of the Parent Survey.

*Teacher Evaluation of Student Reading Skills, Behaviors, and Attitudes:* The Teacher Survey was a 16-item, one-page student rating instrument. Statements were presented as items under the headings of Reading Skills, Participation, Motivation, and Attitudes. Reading teachers were asked to focus on a target student and evaluate the student on the 16 items using a 5-point scale ranging from 1 = lowest skill, infrequent behavior, or poor attitude, to 5 = highest. Individually identifiable information was provided to enable linkage across data files. See Appendix A for a copy of the Teacher Survey.

*Stanford Reading Assessment:* The Stanford Diagnostic Screening test (short test version) was administered to first and fourth graders in Spring 2006. In Fall 2006 the same children as second and fifth graders completed the Stanford Diagnostic Reading Test (complete test version). Screening scores recorded for participants were transformed using Stanford Diagnostic Norming formulas for comparison purposes. Caution is urged for statistical interpretations of this assessment due to the conversion formula used for the Stanford post-test scores and the small number of students in the study who did not complete the summer reading program.

### *Summer Reading Program*

All summer reading program participants, whether or not they were involved in this evaluation, were given a reading log where they recorded when they read or listened to a book. A book could be recorded as an item, in increments of 30 pages, or as 30 minutes of reading. When a child in the summer reading program returned to the library, he or she spoke with a staff member about what he or she had read. All summer reading program participants received a weekly incentive for visiting the library. Within the program there were three levels of achievement. Participants received an additional incentive when they had completed 14, 28, and 42 books.

The Williamsburg Regional Library also includes a number of activities and special programs over the summer to draw young people and their families into the library. In addition to the traditional storytime, all summer reading program participants are welcome to come to the library to see performances by musicians, storytellers, and puppeteers. A craft project is offered each week. In the summer of 2006, there was a ballet performance. Local museums put on educational animal programs at the library. Two unusual activities that took place in the summer of 2006 were a dog agility demonstration and a special story hour with llamas as featured guests.

Students in the study received the same services as non-study participants who also participated in the summer reading program. However, study participants were given an additional free book as a reward for filling out the surveys. (All children who participated in the summer reading program were given one free book.) The surveys were administered separately from any summer reading program activities.

As mentioned in the Method section, children in the study who reported not checking out or reading any book from the library during the summer reading program were identified as the non-participant comparison group.

*Procedure:*

Participants in the designated grades from both schools were recruited via letters, phone calls, and personal conversations. Student permission slips were distributed and collected prior to the beginning of the six-week summer reading program.

At the end of the summer reading program, students were asked to anonymously fill out the Student Survey and parents were asked to fill out the Parent Questionnaire.

During Fall 2006, the teacher evaluation was distributed to teachers of grades 2 and 5 at participating schools. Students who participated in the summer reading program were identified and teachers were asked to rate the students' reading characteristics using the survey. At this time, achievement data from Spring 2006 and Fall 2006 were collected for students with signed permission slips and entered into spreadsheets for analysis.

*Data Analysis*

The Teacher Survey, Parent Survey, and student achievement data were merged for students with signed parental permission. These data were screened and analyzed using the statistical program SPSS, a statistical and data management software package for analysts and researchers.

## RESULTS

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Program stakeholders identified six (6) evaluation questions for this program.

Evaluation Question 1: How many students sign-up, participate, and complete the summer reading program? What percentage of children who sign-up complete the program?

Using Table 1 Student Participation, it was determined that of the 64 students for whom parental permission was obtained (indicator of “sign-up”) 46 (72%) completed the program (checked out books and shared titles). This percentage relates only to the study participants and should be applied with caution to the larger population due to the small number of study participants.

Evaluation Question 2: Are there any correlations among demographic factors (i.e. race, gender, and socio-economic status (SES)) and sign-up, participation, and completion rates?

When investigating the relationship between study participants’ summer reading program participation and demographic characteristics, the following was found:

- There was not a statistically significant relationship identified between program participation and race.
- There was not a statistically significant relationship identified between program participation and gender.

- There was a relationship identified between program participation and SES.

Children not identified as FaRM (Free and Reduced Price Meals) checked out significantly more books than children who received FaRM. See Table 4.

When reading pre- and post-test scores by study participants were compared by gender, no significant findings were identified.

Table 4. *Frequency distribution between SES and program participation.*

<b>FaRM</b>	<b>No Books Checked</b>	<b>1+ Book Checked</b>	<b>Total</b>
	<i>N (%)</i>	<i>N (%)</i>	<i>N (%)</i>
<b>Yes</b>	5 (62.5)	3 (37.5)	8 (12.5)
<b>No</b>	13 (23.2)	43 (76.8)	56 (87.5)
<b>Total</b>	18 (28.1)	46 (71.9)	64 (100)

Note:  $\chi^2 (N = 64, df = 1) = 5.34, p < .05$ .

Using the educational indicator of Free and Reduced Meals (FaRMs) for SES, it was determined that a relationship did exist between FaRMs and summer reading program participation [ $\chi^2 (N = 56, df = 1) 5.34, p = .02$ ]. As shown in Table 5, 28% ( $n = 5$ ) of students who did not complete the program were identified as FaRMs, while 94% ( $n = 43$ ) of students who did complete the program were No FaRMs. This finding indicates that a greater proportion of students who completed the program were not FaRMs students.

It is possible that the FaRMs students faced difficulty accessing the summer reading program. This finding might also point to an opportunity for the library to increase outreach to specific communities.

Table 5

*Program Participation by SES and Grade Level*

	<i>Grade 2</i>		<i>Grade 5</i>		<i>Total</i>	
	<i>FaRMS</i>	<i>No FaRMs</i>	<i>FaRMS</i>	<i>No FaRMs</i>	<i>FaRMS</i>	<i>No FaRMs</i>
	<i>N (%)</i>	<i>N (%)</i>	<i>N (%)</i>	<i>N (%)</i>	<i>N (%)</i>	<i>N (%)</i>
<b>SRP</b>	1 (4)	25 (96)	2 (10)	18 (90)	3 (6)	43 (94)
<b>No SRP</b>	1 (10)	9 (90)	4 (50)	4 (50)	5 (28)	13 (72)
<b>Total</b>	3 (9)	21 (91)	6 (21)	22 (79)	8 (12)	56 (88)

Note: SRP: Summer Reading Program; No SRP: No Summer Reading Program

Evaluation Question 3: Are incoming 2<sup>nd</sup> and 5<sup>th</sup> grade students who participate in the summer reading program more likely to exhibit changes in reading behavior than those who do not participate in the program?

This question was addressed using the Parent Survey (items 9-12) and the Teacher Survey (items 1–12). Results are shown in Tables 6 and 7. The Parent Survey results (Table 6) had several problems, including: (a) missing data for students who participated in the summer reading program; (b) no surveys were completed for grade 2 students who did not participate in the summer reading program; and (c) only three surveys from parents of grade 5 students who did not participate in the summer reading program were available. Table 7, the Teacher Survey, presents results with very few missing students.

Due to the unavailable data in the Parent Survey, this evaluation question will be addressed using only the Teacher Survey.

Examination of Table 7 indicates that children in the study who participated in the summer reading program were consistently rated higher by teachers as having better reading skills, better reading participation, and better reading motivation compared to students in the study who did not participate in the summer reading program. Eighty percent of students who participated in the summer reading program in grade 2 were rated “High” (rating of 4) or “Very High” (rating of 5) by teachers across these domains, and 80–90% of students in grade 5 who participated in the summer reading program were rated as “High” or “Very High.” For both grades, students who participated in the summer reading program were consistently rated higher than children in the study who did not participate in the summer reading program. Children in the study who did not participate in the summer reading program were consistently rated 10–20% lower than their peers who participated in the summer reading program.

These results indicate that students who participated in the summer reading program were rated as having better reading skills and behaviors in their fall classrooms compared to their peers.

Table 6

*Results of Parent Survey Evaluating their Child's Changes in Reading Behavior;  
Program Participants Compared to Non Participants*

Parent Survey	Group	Grade 2					Grade 5				
		<i>n</i>	<i>N (%)</i>	<i>N (%)</i>	<i>N (%)</i>	<i>N (%)</i>	<i>n</i>	<i>N (%)</i>	<i>N (%)</i>	<i>N (%)</i>	<i>N (%)</i>
Q9	SRP	18	8 (44)	5 (28)	4 (22)	1 (5)	17	8 (47)	6 (35)	3 (18)	0
Forgot over summer	No SRP	10	0	0	0	0	3	0	0	2 (67)	1 (33)
	SRP	18	0	2 (11)	6 (33)	10 (56)	18	0	3 (17)	3 (17)	12 (66)
Reads well	No SRP	10	0	0	0	0	3	0	0	1 (33)	2 (67)
	SRP	16	0	1 (6)	4 (25)	11 (69)	18	0	1 (5)	5 (28)	12 (67)
Q11	No SRP	10	0	0	0	0	3	0	0	1 (33)	2 (67)
	SRP	10	0	0	0	0	3	0	0	1 (33)	2 (67)
Well prepared	No SRP	10	0	0	0	0	3	0	0	1 (33)	2 (67)
	SRP	17	2 (12)	1 (6)	9 (53)	5 (29)	16	1 (6)	2 (13)	8 (50)	5 (31)
Q12	No SRP	10	0	0	0	0	3	0	0	2 (67)	1 (33)
	SRP	10	0	0	0	0	3	0	0	2 (67)	1 (33)

Note: SRP: Summer Reading Program; No SRP: No Summer Reading Program; NT: Not True; NVT: Not Very True; ST: Somewhat True; VT: Very True; D: Disagree; SD: Somewhat Disagree; SA: Somewhat Agree; A: Agree

Table 7

*Results of Teacher Survey Evaluating Children's Changes in Reading Behavior;  
Program Participants Compared to Non Participants*

Teacher		Grade 2					Grade 5						
		VL	L	M	H	VH	VL	L	M	H	VH		
<b>SKILLS</b>		<i>n</i>	<i>N (%)</i>	<i>N (%)</i>	<i>N (%)</i>	<i>N (%)</i>	<i>N (%)</i>	<i>n</i>	<i>N (%)</i>	<i>N (%)</i>	<i>N (%)</i>	<i>N (%)</i>	<i>N (%)</i>
Q1	SRP	23	1 (4)	3 (13)	1 (4)	8 (35)	10 (44)	20	1 (5)	1 (5)	2 (10)	7 (35)	9 (45)
	No SRP	9	0	0	3 (33)		1 (11)	7	0	1 (14)	1 (14)	3 (43)	2 (29)
Q2	SRP	23	1 (4)	1 (4)	2 (9)	5 (22)	14 (61)	20	1 (5)	1 (5)	1 (5)	9 (45)	8 (40)
	No SRP	9	0	0	4 (44)	4 (44)	1 (12)	7	0	1 (13)	2 (29)	2 (29)	2 (29)
Q3	SRP	23	1 (4)	1 (4)	2 (9)	7 (30)	12 (53)	20	1 (5)	1 (5)	1 (5)	8 (40)	9 (45)
	No SRP	9	0	1 (11)	2 (22)	6 (67)	0	7	0	1 (13)	3 (43)	1 (14)	2 (29)
Q4	SRP	23	1 (4)	1 (4)	2 (9)	7 (30)	12 (53)	20	1 (5)	1 (5)	2 (10)	7 (35)	9 (45)
	No SRP	9	0	1 (11)	3 (33)	5 (56)	0	7	1 (13)	0	2 (29)	2 (29)	2 (29)
<b>PARTICIPATION</b>													
Q5	SRP	23	2 (9)	1 (4)	1 (4)	6 (26)	13 (57)	20	0	0	3 (15)	7 (35)	10 (50)
	No SRP	9	0	1 (11)	4 (44)	3 (33)	1 (11)	7	0	0	2 (29)	2 (29)	3 (44)
Q6	SRP	23	1 (5)	1 (5)	2 (9)	4 (18)	16 (70)	20	0	0	4 (20)	2 (10)	14 (70)
	No SRP	9	0	2 (22)	2 (22)	2 (22)	3 (33)	7	0	0	2 (29)	1 (14)	4 (57)
Q7	SRP	23	1 (4)	1 (4)	2 (9)	3 (13)	16 (70)	20	0	0	3 (15)	6 (30)	11 (55)
	No SRP	9	0	1 (11)	3 (33)	1 (11)	4 (44)	7	0	1 (14)	1 (14)	1 (14)	4 (58)
Q8	SRP	23	1 (4)	1 (4)	1 (4)	4 (18)	16 (70)	20	0	1 (5)	1 (5)	6 (30)	12 (60)
	No SRP	9	0	0	3 (33)	3 (33)	3 (33)	7	1 (14)	0	1 (14)	2 (29)	3 (43)
<b>MOTIVATION</b>													
Q9	SRP	23	0	1 (4)	2 (9)	5 (22)	15 (65)	20	0	0	1 (5)	8 (40)	11 (55)
	No SRP	9	0	1 (11)	1 (11)	4 (44)	3 (33)	7	0	1 (13)	2 (29)	2 (29)	2 (29)
Q10	SRP	23	0	2 (9)	1 (4)	5 (22)	15 (65)	20	0	1 (5)	1 (5)	8 (40)	10 (50)
	No SRP	9	0	1 (11)	3 (33)	2 (22)	3 (33)	7	0	0	4 (58)	1 (14)	2 (29)
Q11	SRP	23	1 (4)	1 (4)	2 (9)	3 (13)	16 (70)	20	0	2 (10)	3 (15)	4 (20)	11 (55)
	No SRP	9	0	2 (22)	3 (33)	0	4 (44)	7	0	1 (13)	2 (29)	2 (29)	2 (29)
Q12	SRP	23	0	2 (9)	2 (9)	4 (18)	15 (65)	20	0	0	1 (5)	9 (45)	10 (50)
	No SRP	9	0	1 (11)	1 (11)	6 (66)	1 (11)	6	0	0	3 (43)	1 (14)	2 (29)

Note: SRP: Summer Reading Program; No SRP: No Summer Reading Program; VL: Very Low; L: Low; M: Moderate; H: High; VH: Very High

Evaluation Question 4: Are incoming 2<sup>nd</sup> and 5<sup>th</sup> grade students who participate in the summer reading program more likely to express positive attitudes about reading than those who do not participate in the program?

The Student self-report survey results are in Table 8. These findings provide insight about how a summer reading program can impact young peoples' attitudes about reading and the library. Although this survey only provides a snapshot of how children in the study felt after completing the summer reading program, their reported attitudes are still exciting. Ninety-two percent of study participants said that it is "A lot like me" to read more than five books this summer. Accordingly, 88% reported that it was "A lot like me" to like visiting the library. Ninety-eight percent of study participants chose either "A lot like me" or "A little like me" when responding to the statement, "I pick books and spend my free time reading."

To address this evaluation question, the Teacher Survey (items 13–16 for the domain of Attitudes) and the Parent Survey (items 7 and 8) were examined. Results are shown in Table 9.

Results from the Teacher Survey indicated that children in the study who participated in the summer reading program were generally rated higher than their peers in the study who did not participate in the summer reading program for survey questions about reading attitude.

Rising second graders who participated in the summer reading program were rated 10% higher than their peers in the study who did not participate in the summer reading program on all questions except for one. (In the survey, teachers rated students in the study who participated in the summer reading program "High" or "Very High," 80%

or higher across all questions barring one.) The only area where rising second grade students in the study who did not participate in the summer reading program were rated higher by their teachers was question 16 (“Perception of the importance of reading”). Children in the study who did not participate in the summer reading program were rated slightly higher by their teachers when the “Very High” and “High” responses are combined.

Rising fifth graders who participated in the summer reading program were consistently rated higher across all items compared to their study peers who did not participate in the summer reading program. These results indicate that students who participated in the summer reading program were rated as having better reading attitudes than their peers.

Table 8

*Results of Student Self-Report Survey, Summer Reading Program Participants Only*

Survey Item	Not at all	A little	A lot like	Total
	like me	like me	me	
	<i>N (%)</i>	<i>N (%)</i>	<i>N (%)</i>	<i>N (%)</i>
I like to go to school	2 (3.9)	17 (33.3)	32 (62.7)	51 (100)
I like to read books	2 (3.9)	13 (25.5)	36 (70.6)	51 (100)
I read more than 5 books this summer	3 (5.9)	1 (2.0)	47 (92.9)	51 (100)
I can read aloud with few mistakes	2 (3.9)	23 (45.1)	26 (51.0)	51 (100)
I ask my teacher for help reading	24 (47.1)	21 (41.2)	6 (11.8)	51 (100)
I have trouble completing assignments on time	33 (64.7)	13 (25.5)	5 (9.8)	51 (100)
I would rather watch TV than read	22 (43.1)	20 (39.2)	9 (17.6)	51 (100)
I have trouble remembering facts I have read	20 (39.2)	28 (54.9)	3 (5.9)	51 (100)
I have trouble sounding out words	22 (43.1)	24 (47.1)	5 (9.8)	51 (100)
I like to figure out the end of a book before finishing	9 (17.6)	23 (45.1)	19 (37.3)	51 (100)
I have a lot of books in my house	0	4 (7.8)	47 (92.2)	51 (100)
I like to visit the library	2 (3.9)	4 (7.8)	45 (88.2)	51 (100)
I pick books and spend my free time reading	1 (2.0)	26 (51.0)	24 (47.1)	51 (100)

Table 9

*Results of Parent and Teacher Surveys Evaluating Children's Changes in Reading Attitude; Program Participants Compared to Non Participants*

Teacher		Grade 2					Grade 5						
		VL	L	M	H	VH	VL	L	M	H	VH		
		n N (%)	N (%)	N (%)	N (%)	N (%)	n N (%)	N (%)	N (%)	N (%)	N (%)		
Q13	SRP	23	1 (4)	1 (4)	1 (4)	4 (18)	16 (70)	20	0	0	2 (10)	10 (50)	8 (40)
	No SRP	9	0	1(11)	1(11)	4 (44)	3 (33)	7	0	1 (13)	2 (29)	2 (29)	2 (29)
Q14	SRP	23	2 (9)	0	2 (9)	5 (22)	14 (61)	20	1 (5)	3 (15)	2 (10)	7 (35)	7 (35)
	No SRP	9	0	0	2 (22)	5 (55)	2 (22)	7	0	2 (29)	1 (13)	2 (29)	2 (29)
Q15	SRP	23	2 (9)	1 (4)	1 (4)	2 (9)	17 (74)	20	0	4 (20)	3 (15)	5 (25)	8 (40)
	No SRP	9	0	1(11)	2 (22)	5 (55)	1(11)	7	0	2 (29)	1 (13)	1 (13)	3 (43)
Q16	SRP	23	1 (4)	1 (4)	2 (9)	2 (9)	17 (74)	20	0	1 (5)	3 (15)	8 (40)	8 (40)
	No SRP	9	0	0	1(11)	5 (55)	3 (33)	7	1 (13)	1 (13)	1 (13)	1 (13)	3 (43)
Parent		NT	NVT	ST	VT		NT	NVT	ST	VT			
Q7	SRP	18	0	0	7 (39)	11 (61)		18	0	2 (11)	5 (28)	11 (61)	
	No SRP	0	0	0	0	0		3	0	0	0	3 (100)	
Q8	SRP	18	0	1 (5)	7 (39)	10 (56)		17	2 (12)	3 (18)	5 (29)	7 (41)	
	No SRP	0	0	0	0	0		3	0	0	0	3 (100)	

Note: SRP: Summer Library Program; No SRP: No Summer Library Program; VL: Very Low; L: Low; M: Moderate; H: High; VH: Very High; NT: Not True; NVT: Not Very True; ST: Somewhat True; VT: Very True.

Evaluation Question 5: Are incoming 2<sup>nd</sup> and 5<sup>th</sup> grade students who participate in the library's summer reading program more likely to score higher on reading achievement tests than those who do not participate in the program?

Results of the Stanford Reading Assessments are presented in Table 10. Students in the study who entered grade 5 in the Fall who participated in the summer reading program had significantly higher pre-test scores across subtests, with the exception of scanning. Pre-test scores for students in the study entering grade 2 were similar. The Comprehension Subtest was the area without a difference between students in the study who participated in the summer reading program and those who did not.

To answer the evaluation question, each reading subscale was analyzed using a Mixed Model ANOVA to determine if changes across time (pre- to post-test) were different between students in the study who participated in the summer reading program and those who did not. The results indicate that for grade 5, the only significant difference was found for the percentile of student scores. Children in the study who were involved in the summer reading program scored higher than their peers who did not participate in the program. Grade 2 findings indicated significantly higher post-test scores for four of the five subscales for children in the study who participated in the summer reading program compared with their peers who did not participate in the program.

These results seem to indicate that summer reading programs could be more valuable for younger students who are learning to read than for older students. This is an interesting finding that bears more study. Is a reading program more valuable for younger students who are building reading skills? Or does the value of a summer reading program change with the age of participants? For older children does it encourage continued reading and library use rather than significantly increasing skills? Without knowing whether students in the study who did not participate in the summer reading program engaged in other summer learning programs, or if they are children who read independently, it is difficult to definitively explain why some of the grade 5 students who did not participate in the reading program gained reading ability over the summer.

Table 10

*Comparison of Stanford Reading Assessment, Spring 2006 (pre) and Fall 2006 (post), between Summer Reading Program Conditions.*

		Summer Reading Program		No Summer Reading Program	
		Pre-test	Post-test	Pre-test	Post-test
Grade 5		<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
	Comprehension	26.60 (2.58)	46.90 (7.30)	22.13 (4.29)	43.75 (8.66)
	Vocabulary	9.30 (0.80)	26.95 (2.46)	7.88 (0.99)	26.00 (4.87)
	Scanning	5.20 (0.89)	24.85 (5.43)	4.63 (0.74)	20.88 (6.75)
	Raw Score Total	41.10 (2.61)	90.70 (13.92)	34.63 (5.60)	90.63 (19.39)
	Percentile*	86.00 (12.59)	76.65 (25.02)	56.25 (23.74)	64.25 (29.56)
Grade 2					
	Phonetic*	13.19 (0.94)	39.19 (1.20)	12.50 (0.85)	37.80 (1.62)
	Vocabulary*	12.00 (1.98)	35.65 (3.47)	10.80 (1.99)	33.00 (4.55)
	Comprehension	10.88 (1.24)	36.31 (2.74)	10.60 (1.58)	35.70 (5.17)
	Raw Score Total*	36.08 (3.03)	112.46 (5.09)	33.90 (4.04)	106.50 (10.66)
	Percentile*	83.88 (15.48)	86.46 (11.45)	73.10 (21.37)	72.70 (24.29)

\*Significant difference ( $p \leq .05$ ) between SRP and NoSRP using mixed model ANOVA, SRP > No SRP

Evaluation Question 6: Are incoming 2<sup>nd</sup> and 5<sup>th</sup> grade students who participate in the library's summer reading program and summer school more likely to score higher on reading achievement tests than those who do not participate in the program?

Parents' responses on surveys were used to identify students who attended summer school. Question 2, "Did your child participate in summer school this summer?" was used to identify this sample. The group of students who participated in both the summer reading program and summer school was analyzed to determine if they had different outcomes on the reading assessment test than their peers who did not participate in summer school but did complete the summer reading program. Group sizes, means, and standard deviations for the Stanford Reading Assessment subscales are shown in

Table 11.

Table 11

*Comparison of Stanford Reading Assessment, Spring 2006 (pre) and Fall 2006 (post), between Summer Reading Program + Summer School and No Summer Reading Program Conditions.*

	SRP + Summer School		No SRP	
	Pre-test <i>M (SD)</i>	Post-test <i>M (SD)</i>	Pre-test <i>M (SD)</i>	Post-test <i>M (SD)</i>
<b>Grade 5</b>				
<i>SRP + SS (n = 16)</i>			<i>No SRP (n = 8)</i>	
Comprehension*	27.13 (2.0)	48.44 (5.8)	22.13 (4.3)	43.75 (8.7)
Vocabulary	9.38 (0.7)	27.19 (2.2)	7.88 (1.0)	26.00 (4.9)
Scanning*	5.25 (1.0)	25.50 (4.9)	4.63 (0.7)	20.88 (6.8)
Raw Score Total*	41.75 (1.9)	101.13 (11.6)	34.63 (5.6)	90.63 (19.4)
Percentile*	89.19 (8.85)	80.81 (21.4)	56.25 (23.7)	64.25 (29.6)
<b>Grade 2</b>				
<i>SRP + SS (n = 23)</i>			<i>No SRP (n = 10)</i>	
Phonetic*	13.30 (0.9)	39.13 (1.2)	12.50 (0.8)	37.80 (1.6)
Vocabulary	12.13 (1.9)	35.52 (3.6)	10.80 (1.9)	33.00 (4.6)
Comprehension	10.96 (1.2)	37.04 (2.8)	10.60 (1.6)	35.70 (5.2)
Raw Score Total*	36.39 (2.9)	112.04 (5.23)	33.90 (4.0)	106.50 (10.7)
Percentile*	85.48 (15.1)	85.48 (11.74)	73.10 (21.4)	72.70 (11.7)

\*Significant difference ( $p \leq .05$ ) between SRP+SS and No SRP using mixed model ANOVA,  $SS + SRP > No SRP$

A mixed model ANOVA was used for each grade level to address this evaluation question. Results for grade 5 study participants indicated that students enrolled in the summer reading program and summer school scored significantly higher than the students in the study that did not participate in the summer reading program on four of the five subscales. Earlier in this paper it was mentioned that the grade 5 pre-tests for children in the study who participated in the summer reading program were significantly higher than their study peers who did not participate in the program. This finding was consistent with these data (with the exception of scanning, which was similar between

groups for the pre-test). Only the percentile subscale demonstrated a significant interaction, which is indicative of the effect that participating or not participating in the summer reading program would have had on study participants' post-tests.

Results for grade 2 also indicated that students enrolled in the summer reading program and summer school scored significantly higher than their peers in the study that did not participate in summer school or the summer reading program on three of the five subscales. Comparison of pre-test scores between these conditions indicated that the three of the Stanford subscales (Phonetic, Total, and Percentile) were significantly different or approached significance at the .05 level, urging cautious interpretation. None of the grade 2 analyses demonstrated any interactions.

In summary, this study indicates that participating in a library summer reading program is positively associated with children's reading ability and attitudes about reading. The findings from this evaluation appear to indicate that the effect is greater for younger children still acquiring basic reading skills. It indicates that libraries need to find better ways to make the program available to children from families whose economic status is below the local average.

Students who attended both the Summer Reading Program and summer school scored significantly higher on selected Stanford Reading Assessment subscales compared to students who did not participate in the program. This finding may point to an opportunity to encourage students already enrolled in summer school to also participate in the Summer Reading Program through cooperative scheduling and outreach. It also suggests that the Summer Reading Program can be beneficial to students who are also participating in other types of summer learning experiences such as summer day camps.

This provides another avenue libraries can explore through outreach services. In fact, exploring ways to fit Summer Reading Programs into the schedule of children participating in different types of learning and enrichment activities, and providing easy access to the program for children with limited ability to visit the library may be the most important avenues for libraries to explore.

Summer Reading Programs continue to be an important public library service. Adapting service delivery methods and accessibility can make them a more powerful tool to promote literacy among our children.