

Evaluation of the SPARK Early Literacy Program – Interim Findings

SPARK provides one-on-one tutoring, after-school, and family engagement to kindergarten through 3rd grade students, and has been validated in studies of its impact on students in the Milwaukee Public Schools as having a significant positive impact on literacy.¹

One-on-one tutoring is provided to students during the school day for 30 minutes, up to three times per week. A program manager, who is also a certified teacher, oversees the tutors. Each lesson plan begins with a familiar activity to briefly review a skill the student has already mastered. After this, the tutor administers a running record assessment (this occurs every third lesson). This is followed by phonics activities. Next, the student reads a book that is at his/her instructional level and then does a writing activity. Finally, the tutor reads a portion of a book aloud.

The after-school component is based on the KidzLit program, developed by the Developmental Studies Center. It is a reading enrichment program designed to increase students' motivation to read and build their literacy skills. The KidzLit program is built around using multicultural books and follows a five part process. The KidzLit curriculum contains books and guides that go along with each book. Each book has a series of listed vocabulary words called cool words.

The family engagement component involves a parent partner working with families to bridge the divide between school and home. They do this by translating literacy concepts, educating families about a variety of literacy activities, and validating the literacy practices already happening in the home. Parent partners help families see how they already are incorporating literacy into their children's lives and show parents how to promote literacy more effectively. Parent partners stay connected with families through a monthly newsletter, monthly family events at each site, and phone calls or emails.

In 2014, Boys & Girls Clubs of America (BGCA) received a grant from the Kellogg Foundation to expand SPARK to two additional clubs. Boys and Girls Clubs of North Alabama (BGCNA) was chosen as one of the clubs. BGCA supported BGCNA to implement SPARK in two Huntsville elementary schools.

This brief presents the findings from the evaluation of the SPARK Early Literacy Program in the two North Alabama SPARK sites (J.E. Williams Elementary School and Rolling Hills Elementary School). It focuses mostly on the implementation of SPARK during its first year (2013-2014) in these schools. The report is informed by participation, fidelity of implementation, achievement

¹ <https://uwm.edu/education/research/socially-responsible-evaluation-in-education/milw-community-literacy-spark/>

data, and surveys of SPARK staff about their experiences implementing SPARK during the 2014-2015 school year.

Participation

Across both sites, 51 students were engaged in SPARK; this included 24 in Rolling Hills and 27 in Williams. The Rolling Hills program worked with 2nd and 3rd grade students while the Williams program worked with 1st, 2nd, and 3rd grade students (Table 1). 41 students started SPARK in

Table 1: Students in SPARK by Grade Level

| | Grade | | | Total |
|----------------------|-----------------|-----------------|-----------------|-------|
| | 1 st | 2 nd | 3 rd | |
| Rolling Hills | 0 | 15 | 9 | 24 |
| Williams | 8 | 14 | 5 | 27 |
| Total | 8 | 29 | 14 | 51 |

September of 2014. However, eight students moved away, four students were transitioned out of SPARK because their literacy had improved, and one student was identified as having a reading disability and was therefore not eligible to continue to participate. Ten replacement students were recruited in January and February of 2015. Thus, at the end of the year, SPARK was working with 38 students (19 at Williams and 19 at Rolling Hills) and there were 30 students (14 at Williams and 16 at Rolling Hills) who remained in SPARK throughout the year.

Attendance

Of those students who participated in SPARK throughout the school year (n = 30), the average number of tutoring sessions they received across both SPARK sites was 68 and the average number of after-school sessions they received was 16.2 (Figure 1). Rolling Hills students, on average, received more tutoring sessions than did Williams students (F = 27.2, p < .001). Students in both schools received about the same number of after-school sessions. However, it is worth noting that only 50% of students in each site participated in after-school. Thus, the average student engaged in after-school actually averaged attending about 32 sessions.

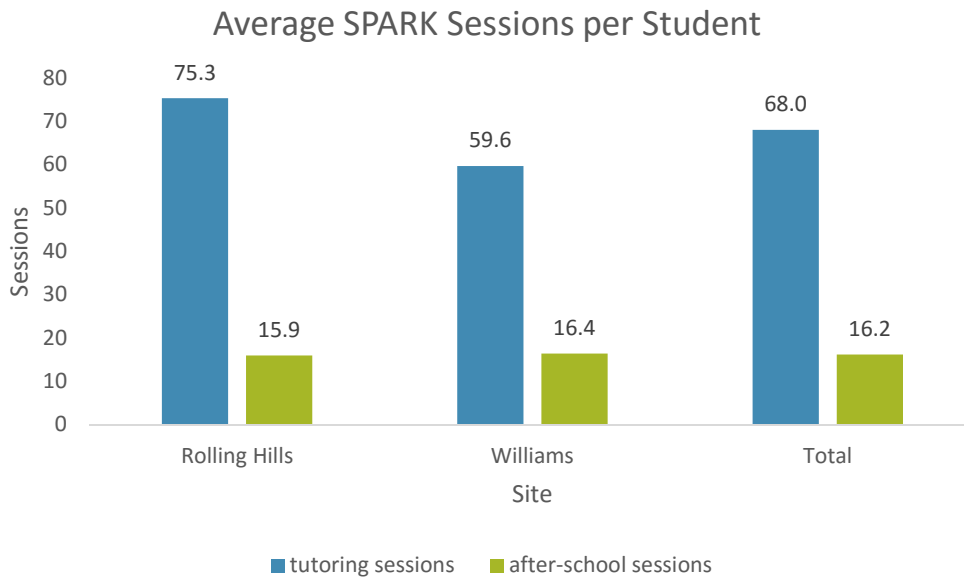


Figure 1: Average SPARK sessions per student by site

The Milwaukee SPARK program has established standards for tutoring participation dosage that define low, medium, and high intensity of tutoring. Specifically, across two years, students receiving less than 90 sessions are considered to have received a low intensity program, between 90 and 120 sessions are considered to have received a moderate intensity program, and over 120 sessions are considered to have received a high intensity program. Since the current evaluation only covers one year of SPARK, half of these thresholds were used to categorize the intensity of programming provided to students. The results suggest that nearly all students (25 out of 30) received a high intensity of SPARK tutoring. Although no standards for after-school participation have been established, that 50% of students were engaged in after-school is roughly the same number that were found to participate in SPARK after-school across the 14 sites participating in the Innovative Approaches to Literacy (IAL) grant (60%). The roughly 32 after-school sessions per after-school participant is somewhat higher than what has been observed in other SPARK programs.

Table 2: Number of students receiving different levels of SPARK tutoring

| | Intensity | | | Total |
|----------------------|-----------|--------|------|-------|
| | Low | Medium | High | |
| Rolling Hills | 0 | 0 | 16 | 16 |
| Williams | 1 | 4 | 9 | 14 |
| Total | 1 | 4 | 25 | 30 |

Table 3 presents participation data broken down by grade level. There were no statistically significant differences found between the amounts of tutoring or after-school students in different grade levels received.

Table 3: Tutoring and after-school sessions by grade level

| | | Tutoring | | | After-school | | |
|----------------------|-----------------|----------|--------------------|----|--------------|--------------------|----|
| | | Mean | Standard Deviation | n | Mean | Standard Deviation | n |
| | | | | | | | |
| Rolling Hills | 2 nd | 76.8 | 4.0 | 8 | 19.0 | 27.5 | 4 |
| | 3 rd | 73.9 | 5.2 | 8 | 12.9 | 18.0 | 4 |
| | Total | 75.3 | 4.7 | 16 | 15.9 | 22.7 | 8 |
| Williams | 1 st | 62.8 | 5.5 | 4 | 27.8 | 23.0 | 3 |
| | 2 nd | 52.4 | 16.0 | 5 | 11.6 | 22.2 | 2 |
| | 3 rd | 64.4 | 2.6 | 5 | 12.2 | 18.3 | 2 |
| | Total | 59.6 | 10.9 | 14 | 16.4 | 20.8 | 7 |
| Total | 1 st | 62.8 | 5.5 | 4 | 27.8 | 23.0 | 3 |
| | 2 nd | 67.4 | 15.7 | 13 | 16.2 | 24.9 | 6 |
| | 3 rd | 70.2 | 6.4 | 13 | 12.6 | 17.3 | 6 |
| | Total | 68.0 | 11.3 | 30 | 16.2 | 21.4 | 15 |

Family Engagement

Boys and Girls Clubs of North Alabama parent partners indicated that they consistently maintained contact with parents by emailing, calling, and talking in person at least every two weeks. They report that this work has greatly aided their efforts to build relationships with families. It may also have contributed to their success engaging families in monthly family SPARK events at Williams. They held six family events during the 2014-2015 school year with a total attendance of 176 family members. There were also two regular school day teachers who attended events.

On average, family events averaged roughly 10 SPARK students per event and 11 parents (Table 4). These family events involved SPARK staff working with family members around different aspects of literacy and helping them understand how they can promote the literacy development of their students. SPARK family events at Rolling Hills were less successful as the program struggled to engage families.

Table 4: Number of attendees per SPARK family event at Williams

| | Mean | Standard Deviation |
|-----------------|------|--------------------|
| parents | 11.3 | 3.4 |
| students | 10.2 | 2.3 |
| teachers | 0.7 | 0.8 |
| siblings | 8.3 | 2.8 |
| Total | 30.2 | 6.8 |

Fidelity of Implementation Monitoring Results

As part of the in-school tutoring component, program managers observe tutors and fill out the fidelity of observation tracking form to ensure that tutors are following the prescribed lesson plan. This process is a critical way for program managers to provide feedback to tutors on the quality of their instruction. The program manager first reviews the tutor’s lesson plan to make

sure it is completed and to find out information about the lesson regarding the familiar activity, running record, word play, instructional reading book, and writing activity. Then the program manager observes the lesson to note that all activities are included, are in the right order, and take the appropriate amount of time. The program manager also notes whether the lesson plan elements are aligned to each other and to the students’ needs. The final section of the observation form collects information about the students’ transition to the tutoring session, the tutor’s preparation level, and the students’ engagement level. It is recommended that each SPARK tutor be observed at least once each month.

A total of 30 observations of 14 tutors were done by Boys and Girls Clubs of North Alabama program managers. 17 were done in Rolling Hills and 13 in Williams. These occurred between October of 2014 and April of 2015. The number of tutor observations was less than recommended; since observations were done over seven months, each tutor should have been observed approximately seven times. However, the results of the observations do provide evidence that tutors were completing the basic aspects of the SPARK tutoring model, following the lesson plan, and that students were engaged. All but one fidelity check indicated that the tutor was fully prepared for the lesson. Further, all but five students were rated as fully engaged in their lesson.

Looking at the specific components of the lessons (Appendix A summarizes these activities), nearly all observed lessons included all of the key activities that comprise SPARK tutoring, with the most time typically spent on the Reading at Instructional Level activity. (Table 5).

Table 5: Time (in Minutes) spent on each SPARK tutoring activity

| | N | Average Minutes | Standard Deviation |
|---------------------------------------|----------|------------------------|---------------------------|
| Familiar Activity | 27 | 2.2 | 1.4 |
| Running Records | 4 | 5.3 | 2.1 |
| Word Play | 28 | 5.6 | 3.6 |
| Writing | 24 | 7.6 | 3.0 |
| Reading at Instructional level | 28 | 10.9 | 4.5 |
| Tutor Read Aloud | 21 | 2.3 | 1.2 |

Within the Word Play activity, the specific instructional tools used are summarized in Table 6. Flip Books and Word Sorts were by far the most common strategies observed. Sound/symbol Books and Decodable Readers were rarely employed strategies used by tutors.

Within the Reading at Instructional Level, nearly all observed sessions included both a review of vocabulary/sight words (83%) and discussion questions (89%).

Within the Writing activity, most often the tutor had students write a sentence connected to the instructional book (75%) instead of a sentence connected to Word Play (19%).

Table 6: Word Play activities used each lesson

| | n | % |
|--------------------------|----|-----|
| Assessment | 3 | 10% |
| Making Words | 7 | 23% |
| Flipbooks | 11 | 37% |
| Sound/symbol Book | 2 | 7% |
| Decodable Reader | 2 | 7% |
| Word Sort | 16 | 53% |
| Elkonin Boxes | 0 | 0% |

Staff Survey Results

Eight SPARK staff across both sites participated in an anonymous, on-line survey about their impressions of SPARK. These included five tutors, two parent partners, and one program manager. The results from the surveys are presented across sites and roles so as to maintain the anonymity of respondents.

All respondents indicated that they understood what their role was in SPARK and that they had positive interactions with other SPARK staff.

The most common challenge identified was that the program experienced a high rate of tutor turnover. This was attributed to the low pay rate provided to tutors. Overall though, staff felt that SPARK was a huge success.

When asked how well the training they had been provided prepared them for their role, all but one person indicated “well” or “very well”.

When asked what additional training/information/materials would be useful, three staff persons indicated they would like to be more connected with other SPARK programs or to have more visits and communications from BGCA to make sure they are doing the program correctly. Two staff also indicated they needed more leveled readers.

When asked about the challenges they faced, a variety of things were mentioned. These included making the printer work, figuring out how to communicate well with teachers, managing classroom environment for KidzLit, getting students to attend KidzLit, and not having money allocated for family nights.

When asked about what helped them do their job, four mentioned other staff persons and the strong collaboration within their site. One also mentioned that principals were very supportive of them. Two mentioned that SPARK materials helped them do their jobs well.

Finally, when asked if they had any other comments, four staff persons took the opportunity to praise SPARK and suggest that it is very much needed in their school. As one staff person stated:

“The teachers, parents and kids love the program. I have kids begging me to be in SPARK because they see how much their classmates love coming to be tutored. For me, I have accomplished the goal of SPARK being seen as a positive and not a negative among the students at Williams.”

Running Records Results

SPARK tutors maintained a Running Records of student reading levels throughout the year.² Running records assigns a letter from A to Z, identifying the literacy level of each student. These letters roughly correspond to reading grade levels such that kindergarten reading is from A to C, first grade from D to J, second grade from K to P, and third from Q to T.

The results of Running Records assessments done at the start of SPARK and the end of SPARK are presented in Table 7. These results show that only 7% of students were reading books at their grade level when they started SPARK. By the end of their participation though, 43% were reading at grade level. The average 1st grade students improved 4.3 reading levels, the average 2nd grade student improved 4.2 levels, and the average 3rd grade student improved 2.7 levels. Table 8 presents a breakdown of the number of students within each grade that improved one all the way up to nine reading levels.

Table 7: Reading grade level of student by grade level

| Beg of year RR | | | | | |
|-----------------------|---|-----------------|-----------------|-------|--------------------------|
| | K | 1 st | 2 nd | Total | % reading at grade level |
| 1st | 4 | 0 | 0 | 4 | 0% |
| 2nd | 3 | 8 | 2 | 13 | 15% |
| 3rd | 0 | 5 | 8 | 13 | 0% |
| Total | 7 | 13 | 10 | 30 | 7% |
| End of year RR | | | | | |
| | K | 1 st | 2 nd | Total | |
| 1st | 0 | 4 | 0 | 4 | 100% |
| 2nd | 0 | 4 | 9 | 13 | 69% |
| 3rd | 0 | 1 | 12 | 13 | 0% |
| Total | 0 | 9 | 21 | 30 | 43% |

Table 8: Number of students improving their Running Records Levels

| | 1 | 2 | 3 | 4 | 5 | 6 | 8 | 9 | Total |
|-----------------------|----------|----------|----------|----------|----------|----------|----------|----------|--------------|
| 1st | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 4 |
| 2nd | 1 | 1 | 4 | 4 | 0 | 1 | 1 | 1 | 13 |
| 3rd | 2 | 4 | 4 | 2 | 1 | 0 | 0 | 0 | 13 |
| Total | 3 | 5 | 8 | 9 | 2 | 1 | 1 | 1 | 30 |

² <https://www.readinga-z.com/helpful-tools/about-running-records/>

Finally, a cross-tabulation of beginning and end of year Running Records, grade level equivalencies, are presented in Table 9. These results show that there were a number of students who improved their reading grade levels. Specifically, seven students that started the year reading books at a kindergarten level, ended the year reading at a first grade level.

Additionally, nine students who started SPARK reading at a 1st grade level, ended reading at a 2nd grade level.

Table 9: Beginning and end of year reading levels

| Beg of year RR | End of year RR | | | |
|-----------------------|----------------|-----------------|-----------------|-------|
| | K | 1 st | 2 nd | Total |
| K | 0 | 7 | 0 | 7 |
| 1st | 0 | 2 | 11 | 13 |
| 2nd | 0 | 0 | 10 | 10 |
| Total | 0 | 9 | 21 | 30 |

Phonological Awareness Literacy Screening (PALS) Results

The PALS is a criterion-referenced, teacher-administered assessment of literacy. The technical reference manual³ reports high internal reliability of between .76 and .83 and high inter-rater of approximately .92. Test-retest reliabilities were reported as between .92 and .96. It also was reported to have both concurrent and predictive validity with a variety of other reading assessments.

SPARK uses the PALS by administering it to all students at the start of their participation and again at the end of the year. As a way of measuring the impact of SPARK, student performance at the beginning of the year was compared to performance at the end of the year. Specifically, we compared the number of students who met literacy benchmarks at the beginning of the year to the number that met at the end of the year. Scores below benchmarks reflect students at risk of reading difficulty.

The results suggest that at the beginning of the year, 19 out of 30 students were below benchmark (Table 10). However, at the end of the year, only 11 out of 30 students were below benchmark. Eleven students who were below at the beginning of the year, met benchmark by the end of the year. These results suggest that SPARK may have improved the literacy performance of students.

Table 10: Student PALS benchmark status at the beginning and end of the school year

| Beg of year | | End of year | | Total |
|--------------------|--------------|-------------|-----|-------|
| | | Below | Met | |
| Beg of year | Below | 8 | 11 | 19 |
| | Met | 3 | 8 | 11 |
| | Total | 11 | 19 | 30 |

³ https://pals.virginia.edu/pdfs/rd/tech/K_Tech_Ref_2014_B.pdf

Summary Findings

The overall results from the first year of SPARK at BGCNA are positive. There is strong evidence that SPARK was implemented well and with fidelity to the model. Further, many SPARK participants demonstrated significant literacy growth from the beginning to end of the year. Some of the highlights from the evaluation include:

- Nearly all students (25 out of 30) received a high intensity of SPARK tutoring. Students who participated in SPARK throughout the school year averaged 68 tutoring sessions. The roughly 50% of students who participated in after-school averaged 32 sessions. Both the number of tutoring sessions and after-school sessions are somewhat higher than what has been observed in other SPARK programs.
- The family engagement component of SPARK at Williams Elementary School met its objectives. The six family events were well-attended and focused on literacy, with a total attendance of 176 family members. On average, family events averaged 10 SPARK students and 11 parents. In addition to the family events, the parent liaison made biweekly contacts with all participating families. The family engagement component at Rolling Hills struggled to engage families however.
- The results of 30 fidelity of implementation observations suggest that tutors were completing the basic aspects of the SPARK tutoring model, following the lesson plan, and that students were engaged. All but one fidelity check indicated that the tutor was fully prepared for the lesson. Further, all but five students were rated as fully engaged in their lesson.
- The biggest challenge to the successful implementation of SPARK identified by staff was that the program experienced a high rate of tutor turnover. This was attributed to the low pay rate provided to tutors. Overall though, staff felt that SPARK was a huge success.
- Many SPARK students demonstrated significant literacy growth. **While only 7% of students were reading books at their grade level when they started SPARK, by the end of their participation 43% were reading at books at their grade level.**
- According to PALS results, **at the beginning of the year, 63% of students were below literacy benchmarks, and at risk for having reading difficulties. At the end of the year however, only 37% of students were at risk for having reading difficulties.**

Appendix A

Each tutoring session includes five activities:

- The *Familiar Activity* is a brief element that gets the student ready for learning by reviewing a skill they have recently learned.
- *Word play* is a key element in the lesson where students receive targeted, differentiated instruction on foundational reading skills including phonics and phonemic awareness. Word play is individualized to focus on students' needs. It is centered on two main activities: Word Sorts and Making Words. These activities combine both constructivist learning and structured instruction. Each of these activities focus on specific skills and tutors are explicit with students about the lesson's foci. Word Sorts involve students sorting words into various categories to increase their understanding of the structure of sounds and letters. Making Words involves students using different letters to make words and provides a structured way for students to learn how the sounds of language are put together. Students also read phonics-based books during Word Play time and do enrichment activities to cement their understanding of the focus skills.
- During every SPARK lesson, students spend time *Reading a book at their instructional level*. Before reading the book, they do a book walk to familiarize themselves with the content and vocabulary of the book. Students read both fiction and non-fiction books. As students read, tutors use a variety of strategies to help students decode and make meaning of text. Students use graphic organizers to build comprehension skills.
- Students spend time each lesson *Writing* sentences connected to their Word Play skill or their instructional reading book. Tutors help students correctly spell the words in their sentence(s). Elkonin boxes are a central piece of SPARK writing and used to help students encode words. Elkonin boxes are an instructional method used in early elementary grades to build phonological awareness by segmenting words into individual sounds/boxes.
- The lesson ends with a brief opportunity for students to hear their tutor *read a book*.