

Simpson County Schools/Boys & Girls Club Expanded Learning Partnership

BACKGROUND AND METHODOLOGY

In December of 2011, Simpson County Schools and the Boys and Girls Club of Franklin formed a partnership to expand the learning of students at the club during its afterschool program to support their learning and achievement in school. The Boys and Girls Club of Franklin serves more than 200 of our most needy students during the afterschool program where we bus kids daily to provide a safe, supportive environment that includes a nutritious snack, academic time, and structured play/physical activity time. Each Monday through Thursday during the school year, the club schedules about an hour of academic time where every child is expected to participate in some kind of academic support program. Unfortunately, there were too few staff members and volunteers to adequately support the needs of all the students due to budgetary constraints. It is during this academic time that we leveraged our partnership to provide more support to the students to extend their learning with the goal of enhancing each student's achievement in school.

Facing the austere budget brought on by the economic recession, we had very limited funds to work with in developing our program partnership. We designed the partnership to capitalize on talented high school and college students who were interested in teaching or other "helping" careers to work in the program as peer tutors. We hired two certified teachers to serve as our program coordinators and 8 peer tutors with a budget less than \$6,000. They began working with students in February 2012 and continued through the end of the school year in May 2012.

The program coordinators and peer tutors worked with students in grades K-6 who attended the club regularly during the treatment period between February 20th and May 17th, which provided over 45 days of extra support for our students through this partnership. The primary emphasis of the program was on reading support, though some support was provided in math as well. For the purpose of the action research, we chose to use our 3rd grade treatment group as our gauge on the program's effectiveness. We had 31 third graders in our treatment group who received services through the program over the treatment period. We used the MAP assessment (Measure of Academic Progress) through NWEA as our pre/post measure on student growth in reading and math over the year to compare our 3rd graders in the treatment group with a demographically similar randomly selected control group (n=31) who did not attend the Boys and Girls Club of Franklin.

The hypothesis for the action research project is the expanded learning partnership will extend the school day for some of our most needy students in grades K-6 with key supports from trained peer tutors (high school/college students) under the direction of 2 certified teachers and results with improved learning in the classroom as measured by the MAP test when comparing the Fall results with the Spring results, particularly in reading. For the purpose of testing the hypothesis, the third grade test group was selected as there was an adequate sample size (n=31).

RESULTS - Quantitative Findings:

The hypothesis stated the expanded learning partnership with between the Simpson County Schools and the Boys and Girls Club of Franklin would enhance the learning and achievement of students in the classroom as measured by the MAP test comparing the fall results with the spring, particularly in reading which was emphasized.

First, both the treatment and control groups made progress in both reading and math in terms of growth. It is noteworthy that though the control group was demographically comparable to the treatment group in terms of ethnicity and free/reduced lunch status, the control group had higher average scores in both the fall and spring (see Tables 1 & 2). The treatment group showed more growth in reading from the fall to spring compared to the control group (see Table 1), though both groups realized growth less than the national norm group. Interestingly, both groups exceeded the national norm group growth in math and the control group outpaced the treatment group growth in math (see Table 2).

Tables 1: Mean RIT scores on Reading for the treatment group, control group, and the national norm group comparing fall and spring results

3rd Grade - Reading	Fall	Spring	Difference
<i>Treatment Group</i>	<i>186.3</i>	<i>195.0</i>	<i>8.7</i>
Control Group	192.0	199.9	7.9
National Norms	189.9	199.2	9.3

Tables 2: Mean RIT scores on Math for the treatment group, control group, and the national norm group comparing fall and spring results

3rd Grade - Math	Fall	Spring	Difference
<i>Treatment Group</i>	<i>188.6</i>	<i>200.9</i>	<i>12.3</i>
Control Group	193.4	206.6	13.2
National Norms	192.1	203.1	11.0

Again, the Expanded Learning Partnership emphasized reading support, though math instruction occurred as well. It is noteworthy that the treatment group did experience more growth in reading compared to the control group over the year. However, when analyzing the statistical comparison using a T-test to compare the performance of the treatment group with the control group, there was no statistical difference between the fall or spring results in reading (see Tables 3 & 4).

Table 3: Comparison of the Fall MAP READING Results – Treatment vs. Control

Hypothesis test results:		FALL READING TREATMENT VS. CONTROL			
μ_1 : mean of fall treatment group					
μ_2 : mean of fall control group					
$\mu_1 - \mu_2$: mean difference					
$H_0 : \mu_1 - \mu_2 = 0$					
$H_A : \mu_1 - \mu_2 \neq 0$					
(without pooled variances)					
Difference	Sample Mean	Std. Err.	DF	T-Stat	P-value
$\mu_1 - \mu_2$	-5.709677	3.793938	56.23929	-1.504948	0.1379

not significant

Table 4: Comparison of the Spring MAP READING Results – Treatment vs. Control

Hypothesis test results:		SPRING READING TREATMENT VS. CONTROL			
μ_1 : mean of spring treatment group					
μ_2 : mean of spring control group					
$\mu_1 - \mu_2$: mean difference					
$H_0 : \mu_1 - \mu_2 = 0$					
$H_A : \mu_1 - \mu_2 \neq 0$					
(without pooled variances)					
Difference	Sample Mean	Std. Err.	DF	T-Stat	P-value
$\mu_1 - \mu_2$	-4.935484	3.1537104	57.904175	-1.564977	0.123

not significant

Interestingly, there was a significant difference in the spring comparison between the treatment and control groups using the T-stat test demonstrating that the control group realized growth that was significantly different (see Table 6).

Table 5: Comparison of the Fall MAP MATH Results – Treatment vs. Control

Hypothesis test results:					
μ_1 : mean of fall treatment group					
μ_2 : mean of fall control group					
$\mu_1 - \mu_2$: mean difference					
$H_0 : \mu_1 - \mu_2 = 0$					
$H_A : \mu_1 - \mu_2 \neq 0$					
(without pooled variances)					
Difference	Sample Mean	Std. Err.	DF	T-Stat	P-value
$\mu_1 - \mu_2$	-4.7419353	3.035002	59.61961	1.56242	0.1235

Not significant

Table 6: Comparison of the Spring MAP MATH Results – Treatment vs. Control

Hypothesis test results:					
μ_1 : mean of spring treatment group					
μ_2 : mean of spring control group					
$\mu_1 - \mu_2$: mean difference					
$H_0 : \mu_1 - \mu_2 = 0$					
$H_A : \mu_1 - \mu_2 \neq 0$					
(without pooled variances)					
Difference	Sample Mean	Std. Err.	DF	T-Stat	P-value
$\mu_1 - \mu_2$	-5.709677	2.791705	59.95187	2.04523	0.0452

Significant

CONCLUSIONS OF QUANTITATIVE ANALYSIS

As stated, the primary emphasis of the Expanded Learning Partnership between Simpson County Schools and the Boys and Girls Club of Franklin was reading improvement. Though the mean reading growth for the treatment group from the fall to the spring on MAP was greater when compared the control group growth, the analysis shows no statistical difference between the two groups (P-value = 0.123 in the spring). Again, there was a significant difference found in the mean growth of the control group in math compared with the treatment group. Without further analysis, it is impossible to know what kinds of supports the children in the control group received that may have been different from the treatment group who were serve at the club afterschool. Some variables that impact these results include the following:

- The length of the treatment period was about 45 days for about 1 hour per day Monday through Thursday, which is a fairly short period of time relative to the entire school year.
- The regularity of attendance is not known, therefore the consistency of the treatment is in question.
- Using high school students (and one college student) provided less skilled tutors because limits in experience and training.

RESULTS – Qualitative Findings

The quantitative statistical analysis demonstrates no significant impact of the Expanded Learning Partnership on reading and math achievement as measured by the MAP tests. However, anecdotal evidence from observing and listening to our teachers and peer tutors painted a different picture. A qualitative review was conducted to gain further insight to this phenomenon that seemed to indicate real promise to this program at our Boys and Girls Club.

The following questions were provided to one of the teachers who coordinated the program along with five of the students:

- Do you think the Expanded Learning Partnership with the Boys and Girls Club has an academic benefit to the students who participate?
- What was the impact on reading specifically? What was the evidence?
- What was the impact on math specifically? What was the evidence?
- What non-academic benefits occurred as a result of the program? Evidence?
- What specific strategies did you use to improve reading?
- What specific strategies did you use to improve math?
- What changes are being made to the program to increase its effectiveness?
- Do you recommend this program to continue? Why?

Here is a summary of responses from the interviews:

- Do you think the Expanded Learning Partnership with the Boys and Girls Club has an academic benefit to the students who participate?
Peer Tutors and the Teacher:
 - Yes! All the peer tutors and the teacher enthusiastically believe in the program.
- What was the impact on reading specifically? What was the evidence?
Peer Tutors:
 - I observed their reading improve
 - Confidence in reading increased

- They can sound out and pronounce their words better
- They can understand what they read and tell me about it
- They got better with their word lists (Frye lists)

Teacher:

- Used MAP data to pinpoint specific skills
- Worked on fact/opinion, cause/effect, predicting outcomes
- Fluency improved
- Used Frye words and charted progress
- Used the Descarte from MAP
- Dibels results improved

- What was the impact on math specifically? What was the evidence?

Peer Tutors:

- Multiplication skills improved including multi-digit multiplication
- Mean, median, mode
- Taught them how to check their own work for correctness

Teacher:

- We really emphasized reading more
- We worked some on number sense and sequences
- Multiplication facts were emphasized
- Flash cards

- What non-academic benefits occurred as a result of the program? Evidence?

Peer Tutors:

- We were role models using respect
- They look forward to us being there – they can count on us
- We build them up as a person

Teacher:

- Teaching them responsibility
- Organizing their materials
- Ready to start learning
- Respect
- Teamwork
- Supportive environment
- Character building

- What specific strategies did you use to improve reading?

Peer Tutors:

- Frye word lists
- Practiced sounds
- Breaking down the words

- Reading aloud
- Helping them with words they don't know
- Give and take – I read a section, then they read a section

Teacher:

- Pre/post testing
- Round-robin reading
- Thoughtful education organizers around the elements of literature
- Use the homework materials brought from the school
- Frye word lists and flash cards
- See it, say it, use it in a sentence

- What specific strategies did you use to improve math?

Peer Tutors:

- Math games help a lot
- Fraction bingo
- Competitions motivate them to try hard
- Word problems
- Show them how to do it – guided practice

Teacher:

- Used core content
- Education games like multiplication bingo and board games
- Restaurant math with money – real world math

- What changes are being made to the program to increase its effectiveness?

Peer Tutors:

- We have daily plans ahead of time for every day so we know exactly what to work on
- There are more peer tutors which allows us to help more kids
- We have the same kids every day in our small groups
- It is more organized and structured this year

Teacher:

- Full year versus a couple of months
- Working on the curriculum standards
- Pre/post test mastery
- More educational games to reinforce the skills needed
- E-books and AR tests
- Focusing on the standards being taught in the classroom to raise their confidence

- Do you recommend this program to continue? Why?

Peer Tutors:

- Absolutely!
- So many kids are getting a lot out of it
- They are getting the extra attention they need
- They are getting help in specific areas they need help in our small groups
- All year long will allow us to keep the momentum going
- The teachers tell us what the kids need to work on
- Many of these kids don't get the help at home
- It works both ways – we get a lot out of it too!

Teacher:

- Yes!
- It's not just quantitative – there's the affective portion
- They feel special
- They build them up
- Lots of kids from non-traditional homes
- We're that wrap-around program that helps
- They can depend on us to help them up, build them up
- The peer tutors get to mentor, help other, make a difference in another person's life

Conclusions from the Qualitative Analysis

The qualitative results indicate a strong belief in the benefits of the program on the children served by both the peer tutors and the teacher. The passion and commitment to the children and the partnership was evident in all the participants in the qualitative interviews. It is clear they learned a great deal last year that they are using to improve the program. Though the MAP results don't show a statistical difference as a result of the program, there is a strong belief that other measures show academic improvement as a result of their efforts. They also see a clear benefit to the students in non-academic measures. Finally, they believe they are making the necessary improvements to the program that will yield stronger academic results. The fact that the program will be all year long is a very important change. Additionally, we have now 12 peer tutors working at the club in addition to the 2 certified coordinators and the Boys and Girls Club staff. Finally, we are better tracking the students to better ensure consistency of services specifically to their needs. As a result, we have continued the program and will evaluate its effectiveness using quantitative and qualitative analyses techniques.