



Summer Reading Project 2013-2014

Major Question

Does parent support add to the effectiveness of a summer programme which provides books for reading or for maths activities? Comparisons of four groups were used to answer the question.

Group 1 - High interest books only

Group 2 - High interest books plus support

Group 3 – Maths workbooks only

Group 4 – Maths workbooks plus support

The gains in reading and maths were measured using STAR Reading and PAT Maths

Additional Questions

- Does the summer reading programme benefit students of particular reading and maths ability levels?
- Which characteristics of children and families are associated with higher (lower) gains?

Executive Summary (1)

Expected Average Gain in STAR Reading and PAT Maths (per month):

- How did we calculate it?
- For STAR Reading.....

Year 3 - Average scale score = 54 (stanine 5)

Year 4 – Average scale score = 81 (stanine 5)

Expected average gain per month is $(81-54) \div 12 = 2.25$

- For PAT Maths.....

Year 3 - Average scale score = 21 (stanine 5)

Year 4 – Average scale score = 31 (stanine 5)

Expected average gain per month is $(31-21) \div 12 = 0.83$

Executive Summary (2)

1. All four groups made similar large gains in STAR reading, which were significantly higher than expected gains
 - The overall gain was 0.56 stanine (scale score = 5.54). The expected average gain in scale score was 2.25 per month (Dec and Jan = 4.5)
 - t-test was significant ($p < .05$)
2. All four groups made similar small gains in maths, at the expected rate
 - The overall gain was 0.15 stanine (scale score = 1.62). The expected average gain in scale score over summer was 0.83 per month (Dec and Jan = 1.66)
 - t-test was not significant ($p > .05$)
3. Low ability groups gained most.
 - In reading, the "well below" group gained 0.9 stanine (scale score = 10.21) which was significantly greater than other groups
 - In maths, the "well below" group gained 0.62 stanine (scale score = 6.37) which was significantly greater than other groups

Executive Summary (3)

We conclude:

1. A summer programme which provides either reading books or maths workbooks can significantly increase expected gains over summer in reading
2. Adding parent/student support didn't add value
3. It may be that the generalised programme effects across the 4 groups are related to similar interactions and resources promoted by both the books and the maths workbooks. For example, the reading time and library visits recorded by parents were similar across all groups

The Study

- 9 primary schools
- 569 Year 3 students
- 295 Female; 274 Male
- Randomly assigned to four groups
 - **Group 1 (Book)** - students received 12 self-selected reading books and comprehension cards
 - **Group 2 (Book & Support)** - 12 self-selected reading books, comprehension cards, and support from school representative(s)
 - **Group 3 (Maths)** - 2 maths workbooks and maths activity booklet
 - **Group 4 (Maths & Support)** - same as Group 3 and support from school representative(s)

Measurements

- STAR Reading Test
- PAT Mathematics
- Parent and Student Surveys
- Reading and Maths logs

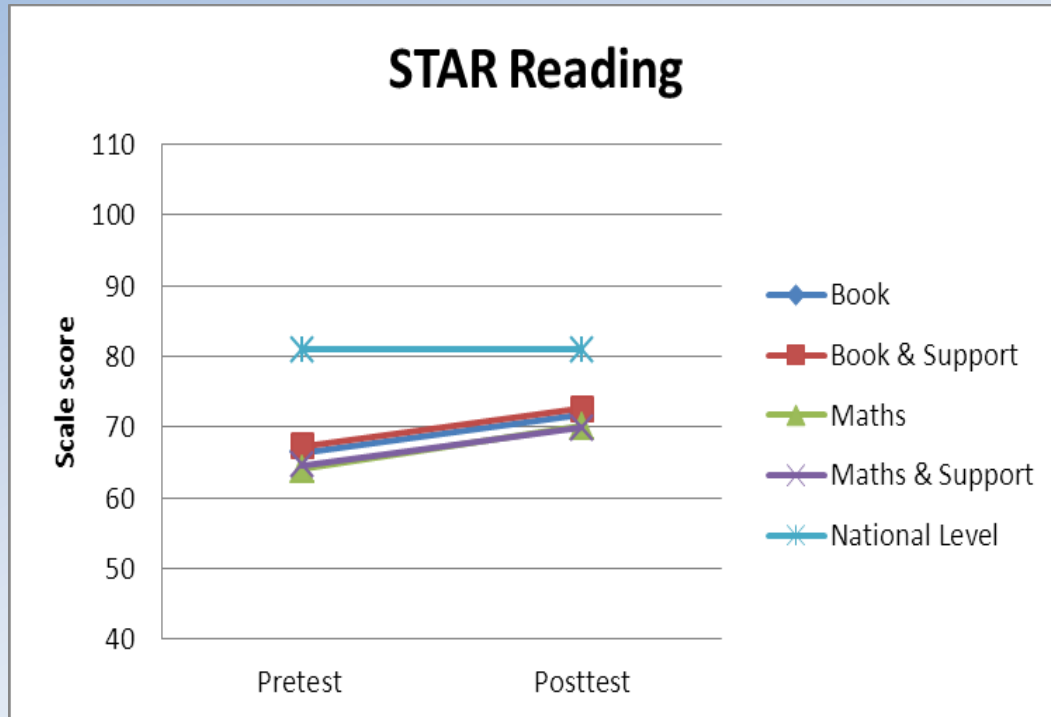
Overall Results: Reading

- a) Significant effect of time from pretest to posttest
- b) Each group has significant gains
- c) An average gain was 0.56 stanine (scale scores = 5.54) after the summer holidays. Expected average gain in summer holidays (Dec and Jan) was 4.5.
- d) Book group gain scores = 5.41
- e) Book & Support gain scores = 5.36
- f) Book vs. Book & Support (effect size < .00)

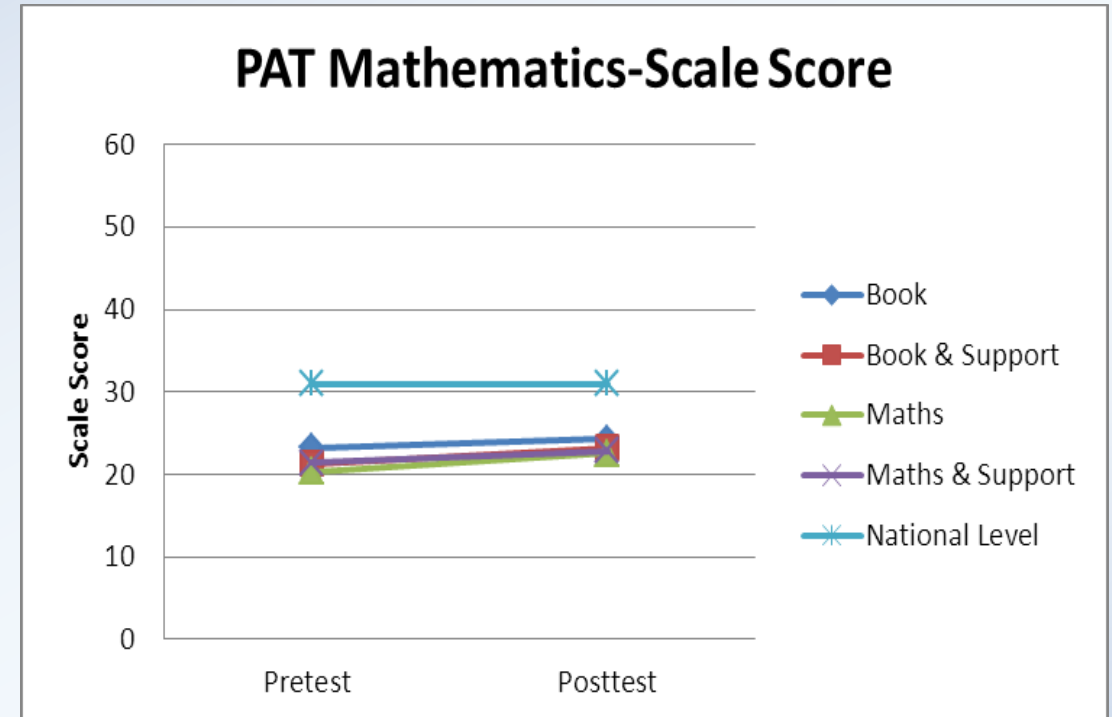
Overall Results: Mathematics

- a) All maths and book groups gained
- b) No significant differences in gains between groups over the summer, Maths group gained most in scale score (2.24)
- c) An average gain was 0.15 stanine (scale score = 1.62). Expected average gain in scale score over the summer holidays (Dec and Jan) was 1.66.
- d) In terms of scale scores, Maths group gained 2.24; Maths & Support gained 1.40; Book group gained 0.97; and Book & Support gained 1.95
- e) Maths vs. Book (effect size $d = 0.06$)
- f) Maths vs. Book & Support (effect size $d = 0.02$)
- g) Maths & Support vs. Book (effect size $d = 0.02$)

STAR Reading and PAT Mathematics



	Pretest	Posttest	Diff	N
Book	66.46	71.87	5.41	116
Book & Support	67.31	72.67	5.36	112
Maths	64.1	70.18	6.08	105
Maths & Support	64.6	69.97	5.37	118



	Pretest	Posttest	Diff	N
Book	23.27	24.25	0.98	108
Book & Support	21.29	23.25	1.96	107
Maths	20.34	22.58	2.24	92
Maths & Support	21.41	22.8	1.39	105

Results: Ability Levels

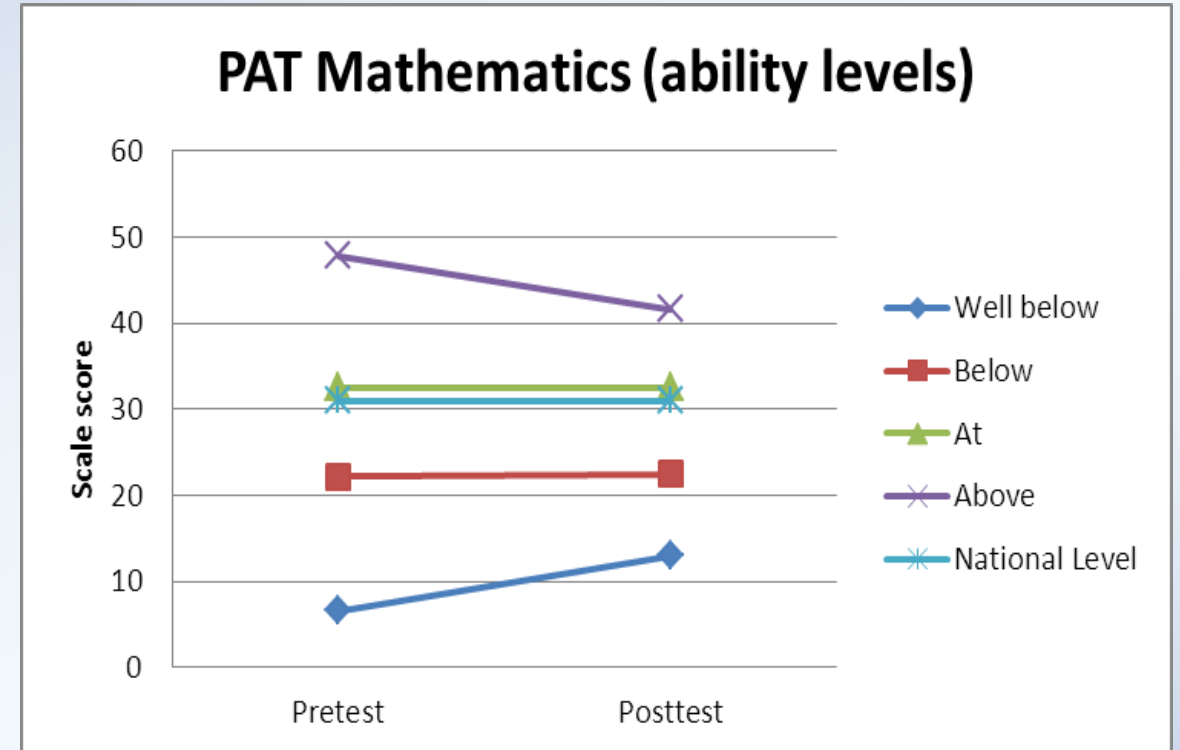
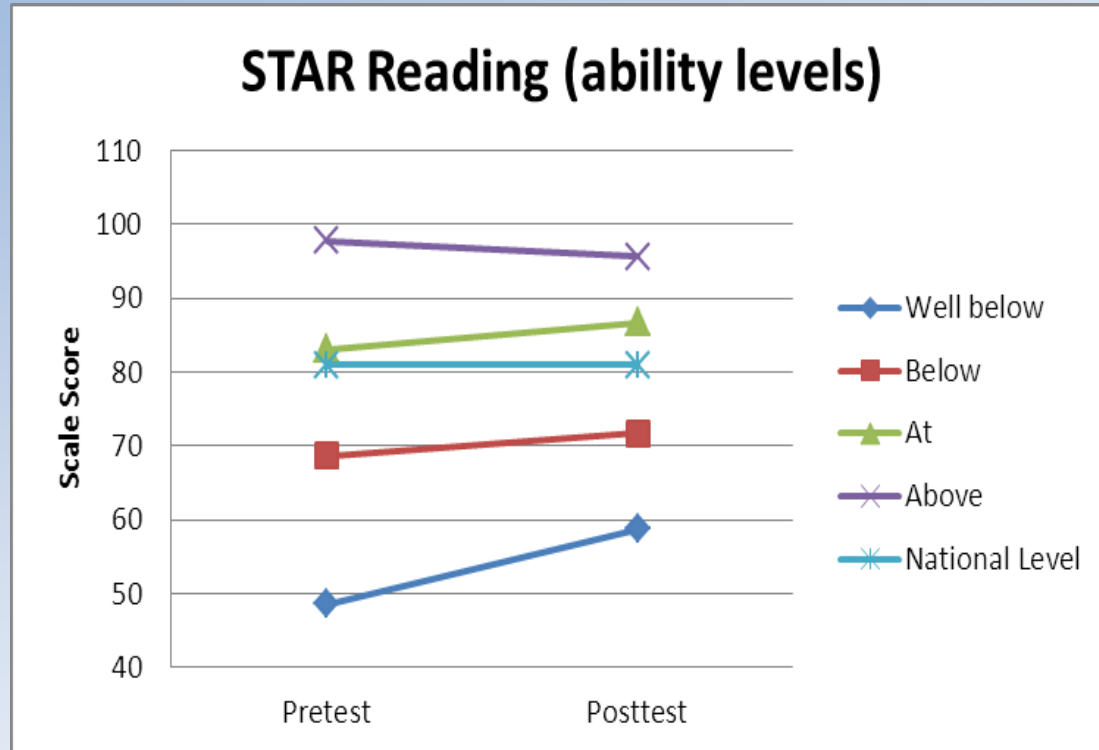
Reading

- “well below”, “below”, and “at” groups made gains
- “well below” group gained 10.21
- “below” group gained 3.09
- “well below” vs. “below” (moderate effect size $d = 0.31$)

Mathematics

- “well below”, “below”, and “at” groups made gains
- “well below” group gained 6.37
- “below” group gained 0.28
- “well below” vs. “below” (moderate effect size $d = 0.31$)

STAR Reading and PAT Maths (Ability Levels)



Level	Pretest	Posttest	Diff	N
Well below	48.58	58.79	10.21	158
Below	68.62	71.71	3.09	182
At	83.12	86.74	3.62	96
Above	97.79	95.65	-2.14	15

Level	Pretest	Posttest	Diff	N
Well below	6.58	12.95	6.37	124
Below	22.13	22.42	0.29	163
At	32.48	32.53	0.05	97
Above	47.76	41.56	-6.2	28

Reading Logs and Maths Logs

- 260 students returned reading logs from book groups (Group 1 and 2)
- Out of the 12 reading books that students received over the summer....
 - Book Group (mean= 8.63, SD=3.57)
 - Book & Support (mean=8.86, SD=3.58)
- 185 students returned mathematics logs from maths groups (Group 3 and 4)
 - 85% of students answered "Yes, I did some questions in the workbooks"
 - 14% of students answered "No, I didn't do any questions in the workbooks"

Number of Children Books At Home

- 144 parents answered both pre- and post-survey
- Students owned an average of 16 children books in Term 4 and 23 books after summer holiday (not including library books, books were given in the project)

Number of Children Books At Home (Ability levels)

	Term 4 2013	End of Summer Holidays		
Reading Level	Number of Books	Number of Books	Diff	N
"Well below"	8	19	11	41
"Below"	17	20	3	56
"At "	21	28	7	45
"Above"	37	44	7	2

Student Survey

Book groups- *“Did you do any maths homework/activities over the summer holidays?”*

- 154 students responded to this question
- Answered “Yes- I did” (62.3%)

Maths groups – *“How many books did you read over the summer holidays?”*

- 159 students responded to this question
- Read 1-10 books (50%)
- Read over 10 books (39%)
- Didn't read any books (7%)

Reading time (parents/caregivers to children)

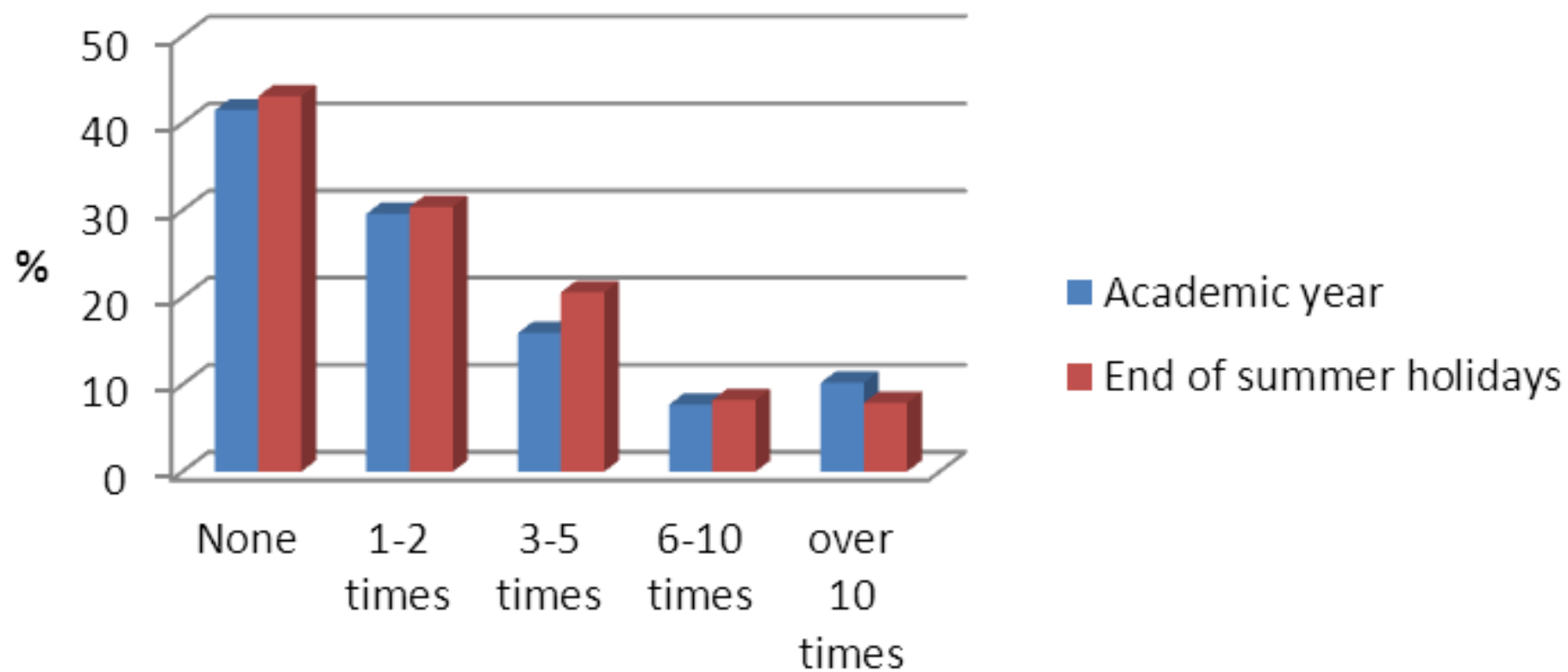
- 154 parents responded to this question
- There were no significant differences between the four groups and the reading ability levels
- Parents spent an average of 24 minutes a day reading to their children



Library Visits

- We asked parents how often their child visited the library in the past two months (during academic year and at the end of summer holidays)
- 201 parents responded to both pre- and post-survey
- There were no significant differences between the treatment groups and between the reading ability levels

How many times has your child been to the public library with you or someone in your family in the past 2 months?



Comprehension Cards and Mathematics Activity Booklet

- Book Groups: comprehension cards- generic questions for fiction and non-fiction books
- Maths Groups: maths activity booklet- maths games and activities
- We asked parents if they found them useful or not at the end of the summer holidays
- 254 parents responded to this question
- 79% of parents thought they were useful
- 9% answered "a little bit useful"
- 4% answered "not useful"

Feedback from School Representatives

- Parents were happy and grateful regarding the project and the resources they had received over the summer
- Parents liked the comprehension cards/ maths activity booklet
- Providing support was very important and effective, especially for students who were struggling in reading
- Students were less motivated after New Year, particularly for those students in the “no support” groups
- A great opportunity to connect to students and local communities
- Incorrect contact details
- More reminders to parents about the project

Conclusions:

We conclude:

1. A summer programme which provides either reading books or maths workbooks can significantly increase expected gains over summer in reading
2. Adding parent/student support didn't add value
3. It may be that the generalised programme effects across the 4 groups are related to similar interactions and resources promoted by both the books and the maths workbooks. For example, the reading time and library visits recorded by parents were similar across all groups

Summer Reading Project 2014-2015

- Investigate the impact and effectiveness of the present study by following the same cohort of student for another year of summer project
- Teacher preparation – review reading/ maths strategies before summer holidays
- Student preparation- pre summer reading/maths session
- Parent preparation- details of the summer project, how they can utilise the comprehension cards and maths activity booklet

Thank you!