



Numeracy Results Overview

In response to requests from schools, we decided to develop a numerical literacy component to our work.

DESIGN AN INTERVENTION

using the Power of 2 programme alongside supplementary play materials.

DEVELOP AN INTEGRATED APPROACH

to testing numeracy development, confidence and self-esteem.

RECRUIT AND TRAIN

a team of 60 mentors to deliver 1-to-1 support to children.

IMPLEMENT

7 numeracy pilot projects benefitting 84 children.

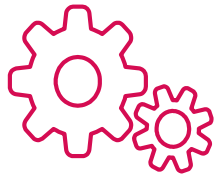
EVALUATE

the pilot and develop plans to expand the programme.

What did the intervention look like?



We targeted children struggling with numeracy.



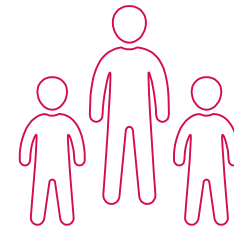
Provided repeated practice, further explanation and reinforcement, delivered in a 1-to-1 coaching session.



The numeracy coaching programme being used was Power of 2.

1 hr x 5

Each project typically involves 1-hour sessions twice a week for 5 weeks.



Each volunteer mentor coaches the same 2 individual children in consecutive sessions during each 1-hour session.



We hold graduation ceremonies after the projects to celebrate children's achievements & mentors' contributions.

How did we measure impact?



Pre- and post-intervention testing was carried out with children involved in the pilots.

WRAT 4

We used the Wide Range Achievement Test 4 (WRAT 4) to measure changes in children's' maths skills.



We also used a new tool, adapted from existing tools with support from our psychologist, to measure changes in children's' self-efficacy.



We also captured qualitative data from child participants, mentors and school staff via customised surveys.

What was the level of input from independent expert advisers throughout the pilot process?

Dr. Mary Nugent and Yvonne Mullan of the specialist *Literacy Working Group* in the **National Educational Psychological Service** both participated in review meetings in the Suas office in June/July 2017 where test results and qualitative data were presented and discussed.

The test results were also shared electronically with Yvonne Mullan who reviewed/analysed the results independently and shared her feedback and suggestions for the next phase of the programme.

Suas delivered...

7

PILOT PROJECTS

84

CHILDREN

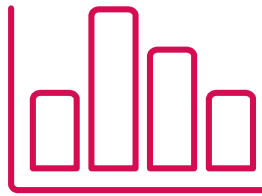
60

MENTORS

Independent experts support programme rollout.

Feedback from key advisors (including the **National Educational Psychological Service**) provides sufficient data to justify the expansion of the programme in autumn 2017.

The results of the pilot were really informative.



Results varied depending on mentor source and age of the child but two clear trends emerged.



Children mentored by TY students improved significantly more than children supported by corporate mentors. Children aged 8-9 improved significantly more than children age 10+.



Phase One rollout of the programme will utilise Transition Year (TY) students and trainee teachers and will focus on children in the 8-9 age bracket who are more likely to benefit.

Children mentored by Transition Year students improved significantly more than children supported by corporate mentors.

TY Mentors

+3.92

MONTHS MATHS AGE

+3.67

STANDARD SCORE

Corporate Mentors

-2.78

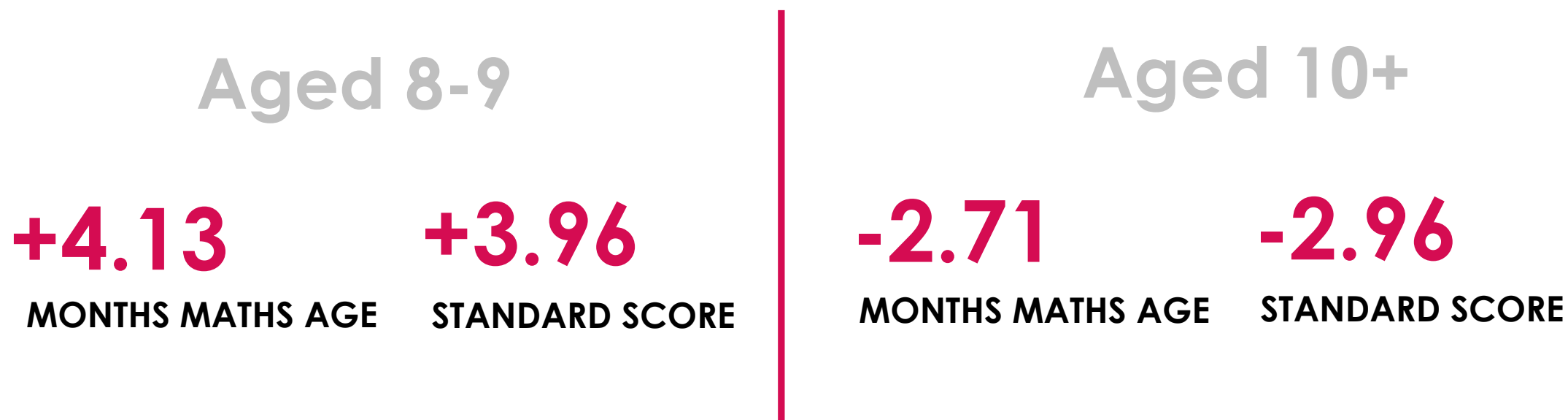
MONTHS MATHS AGE

-2.96

STANDARD SCORE

In light of this, Phase One rollout of the programme will utilise Transition Year (TY) students and trainee teachers who are closer to the curriculum.

Children aged 8-9 improved significantly more than children aged 10+.



In light of this, Phase One rollout of the programme will focus on children in the 8-9 age bracket who are more likely to benefit from the programme.

Why the regression? Independent experts suggest regression is not intervention-related.

LITTLE SCOPE FOR MENTOR ERROR

Given the structured nature of the intervention, workbook & worksheets i.e. there is little scope for error on the part of the mentor.

CHILDREN'S ENGAGEMENT

Strong correlation between children's performance on tests and their levels of engagement. One explanation is that some of the older children, who perhaps weren't as challenged or engaged, were less motivated to perform well on the test.

CHALLENGES HIGHLIGHTED

Interestingly, the project with the oldest children on average was also the project with the lowest scores on average, and mentor and school staff feedback confirmed that child engagement was a challenge in this project.

TIMING OF TESTS AN ISSUE

Another explanation for regressions relates to the particular standardised test that we were using (WRAT 4). Essentially the standard scores are calculated using tables linked to specific age categories. 75% of children who regressed changed age category between the pre and post test so, to put it simply, they were scored more harshly on the post test.

Children's self-efficacy results were very positive.

68%

OF CHILDREN SAID THEY ENJOY SOLVING MATHS PROBLEMS

80%

OF CHILDREN FELT THEY ARE BETTER AT MATHS

85%

OF CHILDREN SAID THEY ARE HAPPIER TO TAKE PART IN MATHS CLASS

Qualitative responses from children and mentors were also very positive.

Paige was very quiet from the beginning of the programme. By the time it was over I think she had gained a lot more confidence in her abilities.

BEATRICE, MENTOR

I liked everything. The card game, snakes and ladders, go fish (I won all of the games), the booklet, fractions and white board games.

ROBYN, PARTICIPANT

I loved snakes and ladders. I loved the card games. I liked the Power of 2 book. I liked the booklet.

KERRI, PARTICIPANT

I liked my teacher Silva. It was really fun and helpful. I learned lots of things. I liked everything.

HALLIE PARTICIPANT

I liked my mentor. I liked the games that we played and the maths that we did.

ELLA, PARTICIPANT

Where to from here? What would Phase One rollout look like?

16 PROJECTS
AUTUMN 2017

and use the outcomes of those projects to support expansion of the programme in 2018.

For our next round of projects in autumn 2017, we will:

NARROW our selection criteria (prioritising children with standard scores in the range of 70-90).

DEVELOP programme focus and structure (introduce session plans with mandatory activities, evaluate different approaches using the Power of 2 workbook).

ADAPT training for volunteer mentors (greater focus on session plans and/or Power of 2 workbook depending on approach).

RECRUIT more secondary school students as mentors.

REVIEW our testing approach (explore alternatives to WRAT4, introduce small questionnaire to measure confidence in maths).