

Paper B - Effects of Move4words on school performance.

Brief review of analysis of reading and writing tracking data for class of children who did Move4words in the summer term of their Year 5.

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Abstract:

A long-term four year study of termly school tracking data from a UK Primary School shows large and significant improvements in reading and writing occur once the children started the Move4words programme. During the year after Move4words, the average reading progress rate doubled for 15 poor readers, and almost tripled for 9 children (1 girl, 8 boys) on School Action Plus or with Statements.

A complete class of 25 children were involved in the study. Data from 22 children were analysed, all children who were present for tests at the key analysed stages were included in the analysis, no data were rejected.

Before Move4words: The school achieved close to the expected progress rate of three points per year, or one complete “level” in two years, for most children in the two and a half years between end of KS1 and the start of the Move4words programme in the summer term of the children’s Year 5.

After Move4words started at the beginning of the summer term in Year 5, reading age increased by 9 months in three months for below-average readers (Paper 3). Over the following six months, after the end of the programme, progress rates in reading were significantly enhanced for 9 low-achieving children who were on School Action Plus or Statements ($p = 0.01$), being raised from 3.0 to an average of 8.3 points per year. Effect sizes are large for reading $d = 3.85$. A group of 15 children had not reached the expected reading level at KS1, but at the current progress rates, at least 8 of the 15 children who did not reach the expected level in Year 2, should reach level 4 in KS2 reading. Higher achievers also improved, but to a lesser degree.

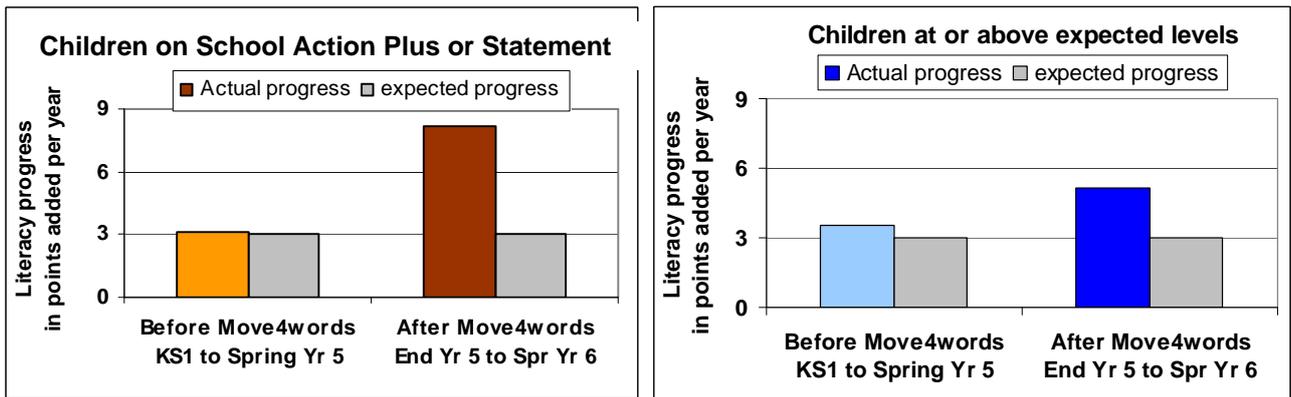


Figure 1: Improvement in Reading progress for below and above average readers. Reading progress in points per year from school tracking data for one class, before and after Move4words in Summer term of their Year 5. 36% of class on School Action Plus or with Statement

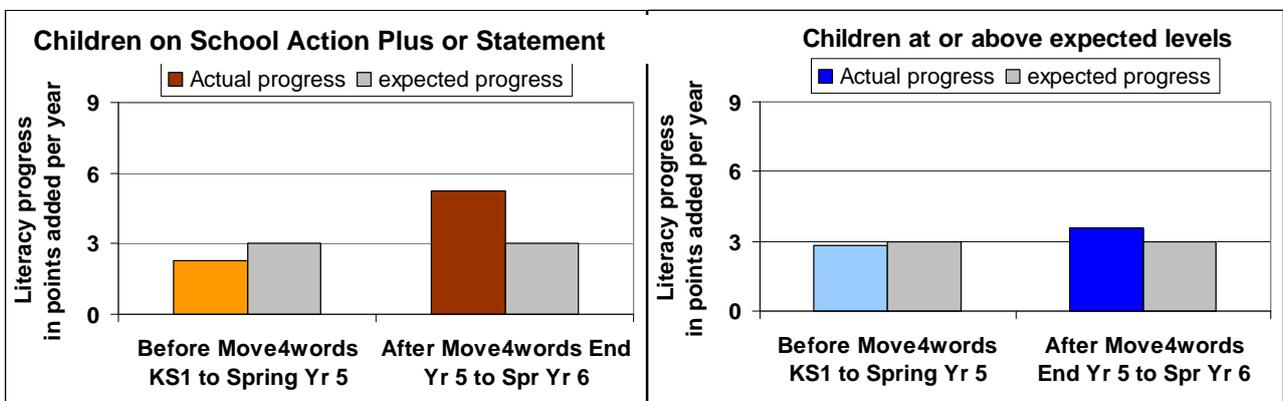


Figure 2: Improvement in Writing progress for below and above average readers. Writing progress in points per year from school tracking data for one class, before and after Move4words in Summer term of their Year 5. 36% of class on School Action Plus or with Statement

The study:

Tracking data was provided on April 2012 for a Year 6 class of 25 children from NW England, who had done Move4words in the summer term of their year 5. The data consisted of 12 termly assessments of reading level starting with KS1 SATs in summer 2008 at the end of the children's year 2.

The position at KS1 SATs where children are expected to achieve Level 2 (i.e. 15 points) was as follows:

- Only seven of the children had reached the expected level or above in reading (between 15 and 19 points; L2b – L3c), 11 reached the expected level in writing.
- Fifteen children were below the expected level (between 3 and 13 points; P6 – L2c), and ten were below the expected level in writing.
- Two of the children had statements of special educational needs and seven more were on "action plus".
- Three children had joined the class in Year 4 or 5, and no prior data was available.

Most children's reading and writing assessments increased noticeably in the Autumn term of their Year 6, after they had finished the Move4words programme.

Only 22 children were present for all four key termly tests used in the analysis, so these are the children included in graphs and statistics. These were: at KS1; before Move4words in Spring Year 5; after Move4words at end of Summer term Year 5; and Spring Year 6.

Expected progress:

The UK government state that they expect schools to achieve progress rates of 3 points per year in reading, writing and mathematics for their pupils.

Actual progress BEFORE Move4words:

Over the nine termly assessments from KS1 at end of Year 2 to the spring term of the children's Year 5 the following rates were achieved in reading and writing:

- | | |
|--|--|
| • 7 Children achieving level 2 at KS1:
(4 girls 3 boys) | Reading: 3.5 points per year
Writing: 2.8 points per year |
| • 15 Children below level 2 at KS1:
(6 girls, 9 boys) | Reading: 3.4 points per year.
Writing: 2.4 points per year. |
| ○ 9 Children on School Action Plus or Statement:
(1 girl, 8 boys) | Reading 3.0 points per year.
Writing 2.3 points per year. |

Actual progress AFTER Move4words:

After the Move4words programme ended, over the three termly assessments between Summer Year 5 and Spring Year 6, the following rates were achieved, and the percentage improvement is shown:

- | | |
|--|--|
| • 7 Children achieving level 2 at KS1:
(4 girls 3 boys) | Reading 5.1 points per year, + 45%
Writing: 3.5 points per year, + 25% |
| • 15 Children below level 2 at KS1:
(6 girls, 9 boys) | Reading 6.8 points per year, +103%.
Writing 4.5 points per year, + 90% |
| ○ 9 Children on School Action Plus or Statement:
(1 girl, 8 boys) | Reading 8.3 points per year, +177%.
Writing 5.3 points per year, + 128% |

Projected KS2 results:

On the basis of the Spring Year 6 reading data, all 7 children who achieved level 2 at KS1 should achieve level 4 at KS2, and at least five should achieve level 5. Of the 15 children who did not reach the expected level in Year 2, at least 8 should reach level 4 in KS2.

The tracking data for writing (see Figure 2) suggests that the children made good progress during Year 3, but progress fell back in Years 4 and 5. Progress picked up again once the Move4words programme started in Summer Year 5, however, fewer children are likely to reach Level 4 in writing than in reading.

Headline figures:

In KS1 SATs at end of Year 2, only 32% achieved the expected level in reading.

Projected KS2 figures for end of Year 6, at least 68% should reach level 4 and 23% should reach level 5.

Statistical analysis:

Statistical analysis shows that the Reading progress rate for the 15 children who did not achieve Level 2 in KS1 SATs actually doubled after the Move4words programme and this increase is statistically significant ($p = 0.02$). Similarly, the Reading progress rate for the sub-set who were on School Action Plus or Statements

almost tripled after the Move4words programme and this increase is also significant ($p = 0.01$) with a large effect size of $d = 3.85$. The Writing progress rate improved a large amount although the T-test shows this is not statistically significant because of large variability in individual scores ($p = 0.12$; effect size $d = 3.26$).

The Reading progress rate also increased for the higher achieving children also increased, as the group size is small (7 children) this is not statistically significant ($p = 0.17$), but the effect size is large ($d = 2.83$). For Writing, the progress is also not significant ($p = 0.44$) and the effect size is large ($d = 0.81$).

Raw data:

Graphs of the group average scores for below and above average scoring children at each term are shown in Figures 3 and 4.

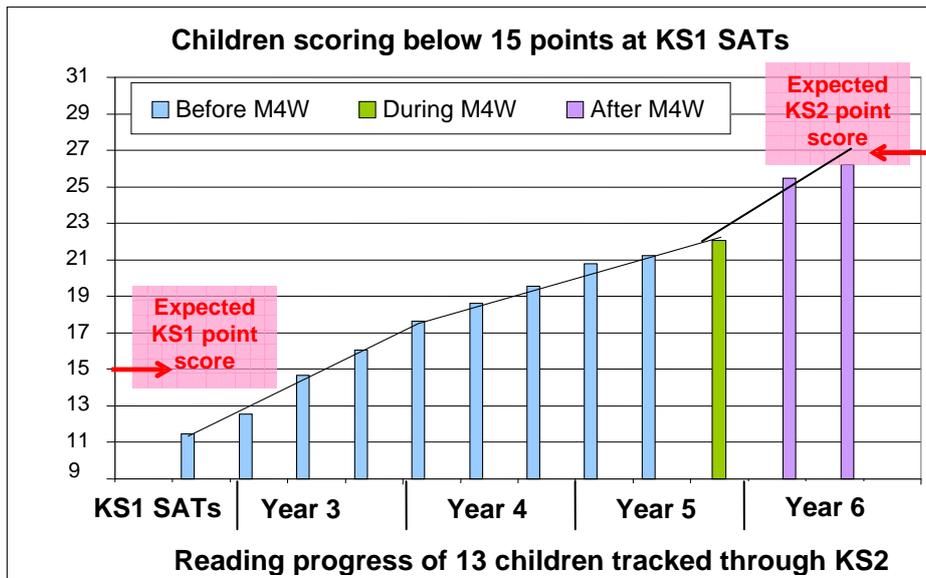


Figure 3: Average Reading points score for children who achieved less than the expected points score of 15 at KS1 SATs in their Year 2. Two children are not included in this graph, as data were not available from Year 3 and Year 4.

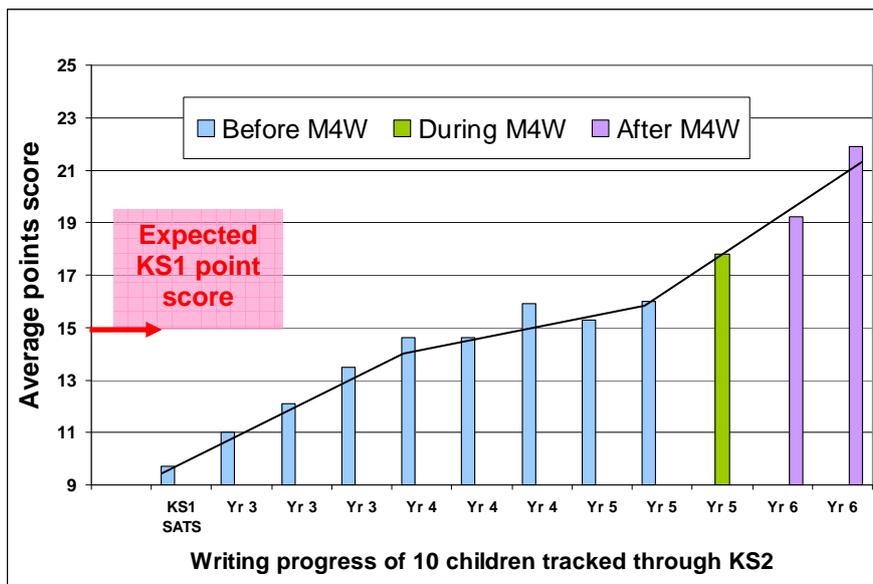


Figure 4: Average Writing points score for children who achieved less than the expected points score of 15 at KS1 SATs in their Year 2.

Conclusions: This trial of Move4words was very successful, particularly for poor readers, most of whom were boys.