Results of Move4words trials in the UK classroom. Overview of impact for Special Educational Needs

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Abstract:

Less than 15% of UK children with special educational needs (SEN), including dyslexia, receive diagnosis of their condition, so 1.5 million SEN children do not receive support tailored to their specific needs.
Large-group interventions which improve performance and ability for SEN pupils, and which can be delivered by the class teacher, would be a very cost-effective addition to current provision in UK schools.
Pilot trials of the Move4words intervention in 2011 and 2012 were very successful in improving reading and exam performance. The greatest impact was seen for children performing below the 5th percentile (with large effect sizes varying from 0.8 to more than 1). All ability ranges benefited to some extent, the higher the ability, the smaller the impact.
It is unlikely that these effects can be dismissed as just a placebo effect, due to extra attention. The children who experience the greatest impact from Move4words are those who have already had a considerable amount of one-to-one or small group support in their time at school.

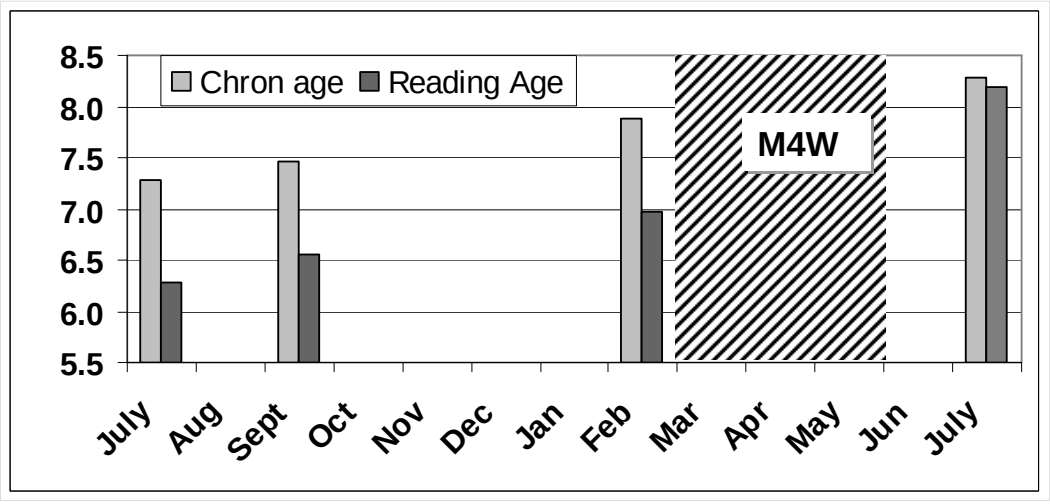
Reading age of pupils aged 7 – 12 years

Longitudinal trials of reading age
Some mainstream schools tracked reading age before and during the intervention. These data showed large increases in reading age during the intervention (e.g., Fig 1). The effects were greatest for children with Special Educational Needs.

Pupils below the 5th percentile had an initial reading age of less than 5 years, and an average age of 8 years. This means that, despite three years of intensive support, they had made very little reading progress. During the 7 months before the intervention, despite an increased focus on literacy, their reading age only increased by three months. In contrast, during a five month period including Move4words their reading age increased by more than one year. This is a dramatic impact. Here are the statistics: $p < 0.001$, effect size $d = 1.27$, $N = 27$.

For pupils between 5th and 15th percentile, the effect was not quite as great, but was still very significant. Here are the statistics: $p = 0.048$; $d = 1.02$, $N = 15$.

Figure 1: Example of median reading age vs chronological age tracked for 7 months before and 5 months including M4W. Participants were a typical Year 3 class of 31 pupils, aged 7-8 yrs, from a mainstream school, in an area of relative deprivation. The Move4words period is indicated by the grey hatched area.



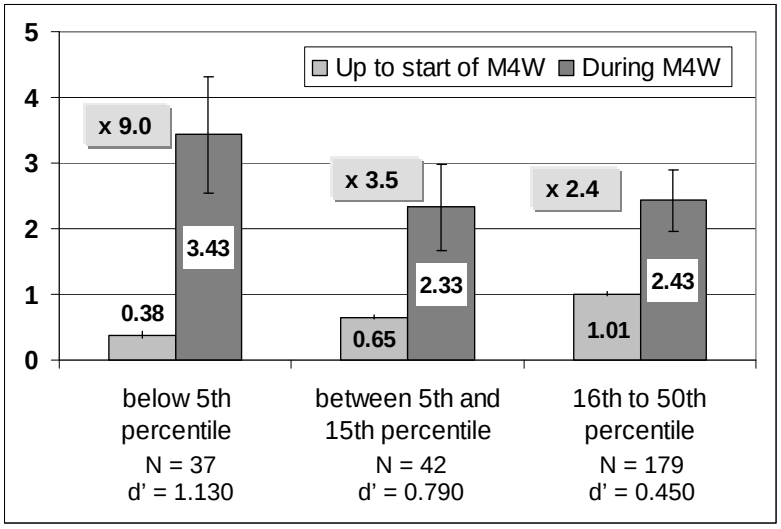
Combining reading age data from 483 pupils in 13 schools.
In this study, 37 children initially performing below the 5th percentile had made almost no progress in reading at school despite 3 or more years of targeted support (median initial reading age = 4.8 yrs; chronological age = 8.5 yrs; reading delay = 3.5 yrs).

After the intervention, this group's median reading age increased by 14 months in only 4 months of time ($p < 0.001$; effect size = 1.1). This is a 9-fold increase, shown in Fig 2 in months of reading age progress per month of time.

42 children between the 5th and 15th percentile also improved significantly, with a 3.5-fold increase in progress rate ($p < 0.001$, effect size = 0.8, Fig 2).

Higher-achieving children achieved smaller but still significant improvements ($p < 0.001$) in reading age (Fig 2), justifying the inclusive use of the intervention.

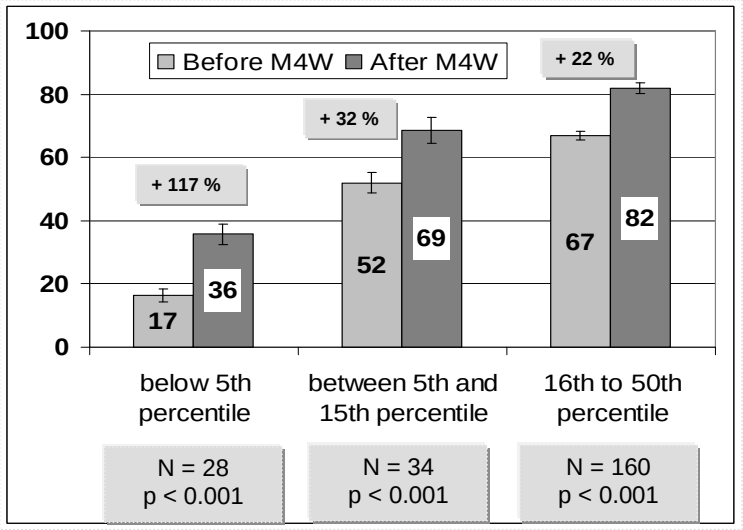
Figure 2: Reading age progress in months per month before and during the intervention. Error bars indicate 2 x Standard Error; Total N = 483 children in mainstream schools aged 7 – 12 years; x 9.0 etc., indicates increase in progress rate during intervention.



Reading speed of pupils aged 7 – 11 years

Significant and large increases of reading speed were measured after the intervention, particularly for very slow readers whose reading speed typically more than doubled (Fig 3).

Figure 3: Reading speed in words per minute before and after the intervention, and percentage improvement.
Error bars indicate 2 x Standard Error;
Total N = 477 children in mainstream schools aged 7 – 11 years.



Progress through National Curriculum Levels in Reading, Writing and Maths

We have tracked the same cohort of children's progress in reading, writing and maths through KS2 for up to two and a half years before the start of the intervention, and for one year after the end of the intervention, for 92 KS2 pupils in Y3, Y4 and Y5 in five classes from three schools, in Wigan, Nottinghamshire and Oxford.

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Progress started to improve significantly immediately after the end of Move4words (Figure 2). Both lower and higher achievers benefited significantly from the intervention in reading, writing and maths. However, the magnitude of the effect was significantly greater for initially lower-achieving students (d = 1.1). than for initially higher-achievers (d = 0.4), and the biggest effect was for the bottom 20%.

The progress rates which were achieved after the intervention are outstanding particularly for initially students in the bottom 20th percentile (exceeding 5 points per year). These outstanding progress rates have transferred into substantial improvements in KS2 scores, narrowing the gap between lower and higher achievers.

Conclusions:

The results of trials of the Move4words programme in the classroom demonstrate that the Move4words programme has a significant positive impact on reading ability for children from Years 4, 5, 6 and 7.

The impact is greatest for children in the bottom 20%, who are usually those who are most difficult to reach.

Paul Marshall's book "The Tail, how England's schools fail one children in five – and what can be done" describes the problems involved in trying to help the bottom 20%.

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