Results of Move4words trials in the UK classroom.
Paper 10 – Self-reported concentration levels, Year 6 and 7.

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Abstract:

Data from 47 students from Year 7 show significant improvements in concentration of 20% after the Move4words programme, particularly for those with initially poor concentration levels. Children in Year 6 showed a 16% improvement although this was not statistically significant. Younger children appear not to be able to accurately answer the self-assessment questionnaire, as results are essentially random for children in Year 5 and below.

The project:

A self-reporting questionnaire was created by Elizabeth McClelland which children filled out before and after the Move4words programme. There were 14 questions and typical questions include "I can't concentrate in class" and "I listen to the teacher when she/he talks to the whole class" and children had to ring a smiley to indicate: "never or rarely"; "sometimes"; "often".
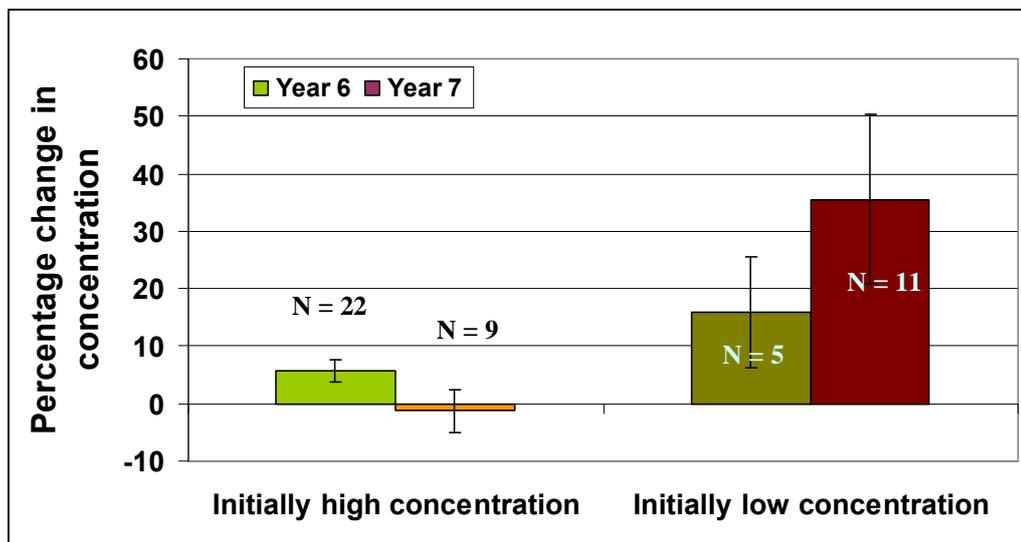
Initial concentration score above 28:	Initial concentration score at or below 28:
Year 6:	Year 6:
T-test: T = 2.97; p = 0.007; df = 21.	T-test: T = 1.67; p = 0.171; df = 4.
Year 7:	Year 7:
T-test: T = 0.35; p = 0.737; df = 8.	T-test: T = 2.42; p = 0.036; df = 10.

Figure 8.1: Group average percentage change in self-reported concentration after the Move4words programme for 47 Year 6 and Year 7 students.

The data shows that children with initially high concentration levels do not change significantly, which is not surprising.

Children with initially low concentration levels show a 20% significant improvement in self-reported concentration levels for the Year 7 group. The Year 6 group with initially low concentration levels improved by 16% although this was not statistically significant. A Year 5 group showed no

improvement on the self-reporting questionnaire, even though the teacher and the children themselves actually said that they could concentrate better!

Looking more closely at the Year 6 data, on subtests with initially high scores students reported significantly increased scores (+ 5%, p = 0.03), and on sub-tests with initially low scores students also reported significantly increased scores (+78%, p = 0.002). This suggests that

Data from the Year 5 group (not included in graph or tables above), on sub-tests with initially low concentration scores students reported increased scores (+37%, p = 0.002) after M4W on average, while on sub-tests with initially high scores students reported significantly decreased scores (-17%, p = 0.001) after M4W, on average. This suggests that the children's answers are close to random, so children in Year 5 and younger may not be able to accurately respond to the self-reporting questionnaire.

Two ways of looking at data. 14 subtests for each child/student.
1. Total score across all subtests for each child. Compare pre and post total score (this is fig 8.1). Split group into two, those whose total score is 28 or lower (i.e. most subtests indicate some concentration problems) and one whose score is above 28 (few problems). Calculate group average score for children/students in both groups.
2.
     a) only look at subtests with scores of 0 or 1 in the pre-test, and then take the exact same subtests and see what each child reported in the post-test. Then calculate group average score for WHOLE group using these sub-test scores pre and post.
     b) repeat with subtests with scores of 2 or 3 in the pre-test.
     This approach allows us to assess how much randomness is included in the answers.

Year 7 data is unequivocal, there is a significant improvement in reported concentration levels.

However, it might be a good idea to look at difference between these two scores +37% to -17%, perhaps there is a statistical argument there somewhere! I.e. a 10% shift in baseline to positive rather than equal positive and negative, as one would expect for truly random answers

This behaviour is NOT seen in the Year 6 data, where on subtests with initially high scores students reported significantly increased scores (+ 5%, $p = 0.03$), and on sub-tests with initially low scores students also reported significantly increased scores (+78%, $p = 0.002$).

Shift in baseline to +36 % for Yr 6 if we assume a random element to the answers where pre-tests high scores tend towards lower scores in post test, and vice versa (this does not allow for the likely real response in that students with lower scores are likely to increase MORE than those with higher scores, so this is a very conservative approach).