



Every Child Counts: Impact summary for term two

1.1 In the period January to April 2009, 822 Year 2 children completed the 1-1 specialist teacher 'Numbers Count' intervention that forms the core of Every Child Counts. In total, 1612 children have completed the programme since September 2008.

1.2 The 822 children completing the programme in the spring term were, on average, involved in the programme over a thirteen week period. Each received an average of 41 one to one lessons, or just over 20 hours of teaching. They moved from an initial average 'Number Age' of 5y 10m on the Sandwell test of early numeracy to an average Number Age of 7y 1m, making 15 months progress over three months of teaching. They made an average gain of 17 standardised score points, with an average standardised score of 101 at the end of their programmes.

1.3 These results represent an improvement over those in the first term, when the average Number Age gain for 790 children taught was 12 months and the average standardised score gain 14 points. Children in both terms had similar levels of initial difficulty (average standardised scores on entry 86 in the first term and 85 in the second term).

1.4 Children's confidence and attitudes towards mathematics were assessed through the use of a Numbers Count Attitude Survey when they enter and exit the programme. In this survey, children are asked to use pictures of faces to rate their enjoyment of and ability at mathematics. The child's class teacher or a teaching assistant rates the child's attitude to and participation in whole-class mathematics sessions, and in group work in class. The child's parent rates the interest that the child shows in mathematics at home and the parent's own confidence in helping the child with mathematics.

1.4 For each set of questions, scores can range from 4 (least positive attitude) to 20 (most positive attitude); the total score ranges from 16 to 80. The 822 children taught moved from an average initial total score of 50 to a score of 61 at the end of their programmes (a 22% gain). In the first term there was a similar (23%) gain. The greatest gains were evident in the teacher and parent ratings.

1.5 721 of the 790 children who took part in the first term and finished their programmes in January were followed up three months later. Four children taught in the autumn term had left their school and so no follow up was possible. The remaining children had not yet reached their three-month follow-up date by the end of the reporting period (the beginning of April). Over the follow up period the 721 children had made an average five month gain in Number Age on the Sandwell test – in other words were continuing to make an above average rate of progress.

1.6 As in the first term of Numbers Count, children are still missing too many of the lessons that should be available for them, but the percentage of lessons missed has reduced. In the first term, having taken out lessons lost because the teacher was participating in Numbers

Count professional development, children missed 17% of the lessons that could have been provided. 6% of these lessons were missed because of child absence. 11% were missed for other reasons – because the teacher was absent, or undertaking other duties in school, or because of events like Christmas concerts and rehearsals. In the second term, the percentage of lessons missed due to child absence remained consistent at 6%, but the percentage of lessons missed due to teacher absence reduced to 10%

1.7 Analysis of data on all 1612 children who have completed the programme so far shows that gains were made by children across the initial attainment range, with the highest gains made by children beginning the programme with standardised scores below 70.

1.8 Up to 55 lessons, there is a strong relationship between the number of lessons taught and child gains. Over 55 lessons, the relationship is less evident.

1.9 Slightly more boys than girls took part in the programme (54% boys, 46% girls). Boys made slightly greater progress (average age equivalent score gain 14 months for boys, 13 months for girls).

1.10 40% of the children taught were eligible for free school meals, compared to 15% in the general primary school population.

1.11 Children learning English as an Additional Language made better progress than native English speakers (average age equivalent score gain 15 months for EAL learners, 13 months for native English speakers). Children from minority ethnic groups made greater progress than White British children.

1.12 Not all children made progress as a result of the intervention. 23 children, for example, appeared to regress on the Sandwell test. Some of this may be due to test factors, but a key action will be to explore the characteristics of pupils, teachers and schools where progress was poor - and also where it was exceptionally good, as with the 173 children who made more than 24 months progress over three months.

1.13 There are some indications of a ' sleeper ' effect – the majority of children who made little initial progress made strong progress at their three month follow up.

1.14 An area we continue to explore is whether the Sandwell test overestimates standardised scores. Initial standardised scores on the test, at an average of 85 over the two terms, were in the order of ten points higher for the children taught than they were for similar children taught in the same schools in the earlier Every Child Counts 'research' phase, on a different test (NFER Progress in Mathematics). The originators of the Sandwell test confirm that they have also found that the Number Ages generated by the Sandwell test are some 8 months higher than those generated by other tests, probably because the standardisation sample had an over-representation of lower attaining pupils We are working with the Sandwell test originators to help them re-standardise the test on a more representative sample. Whilst the possible over-estimation issue does not affect the gains made by children on the same test used at a three month interval, or at follow up, it does affect analysis of whether the programme is reaching the lowest attaining 5% of the attainment range.

1.15 Qualitative feedback indicates that head teachers and teachers perceive the programme as highly valuable. Below is a sample of the feedback we have received from schools.

'It has had an amazing impact on the whole school because it has changed the way we teach maths.' Headteacher

'The results have been excellent. One autistic child moved up a phenomenal amount and is proving to be a highly able mathematician.' Headteacher

'Mae has gained in confidence and is now excelling in everything else across the curriculum. She feels she can solve problems. Before, she doubted herself and would never put herself forward.' Parent

'His behaviour and attitude in class have improved generally. He is more focused, particularly in maths and able to work independently more often. He is now sometimes the first to complete independent tasks in maths.' Class teacher

Feedback indicates that the professional development for teachers and Teacher Leaders is particularly valued:

'I've been a classroom teacher for 16 years and a maths subject leader with very good knowledge of the subject...but Every Child Counts is revolutionary. I've learned more in the past few months than I ever remember learning.' Teacher Leader

'It's been massive.... I've got the tools now to see inside their minds and see where to take them next. I can gradually up the challenge day by day whilst still helping them to 'overlearn' those bits they find the hardest to grasp' Numbers Count teacher

'If I went back into the classroom now I would teach very differently, as a result of the insights provided by the programme.' Numbers Count teacher

1.16 There also continues to be emerging evidence of impact beyond the children directly taught. At St Brigid's primary school in Birmingham, for example, the implementation of the Numbers Count programme is a regular item on staff and senior leadership team meetings so that everyone is informed about and can learn from the programme. The whole staff are increasing their awareness of the difficulties children can encounter when grasping new abstract concepts and, having learned techniques from the Numbers Count teacher, some are beginning to undertake their own work with individual children across the age range. At Redscope Primary, Rotherham, teachers and teaching assistants have observed Numbers Count sessions and are translating aspects of the learning environment of the Numbers Count room and use of apparatus into their own teaching. This is also the case at Chrysostym's Primary School in Manchester, where the headteacher sees the implementation of Numbers Count as a core part of her strategy to raise standards in mathematics across the school. All staff have observed Numbers Count lessons, using structured observations schedules designed to support the implementation of key teaching strategies in their own teaching. At Highgate Infant School, Kings Lynn, the Numbers Count teacher has provided training to all staff on the use of Numicon equipment, including the opportunity for everyone to watch a Numbers Count lesson. Now, children across the school are grouped according to need (rather than age) for fifteen minutes a day of focused work with Numicon with a teacher or teaching assistant.

Schools are also developing wider application for the regular video footage of lessons taken by Numbers Count teachers. At Redscope, the school intends to use video footage of Numbers Count lessons to support their focus on developing the language of reasoning and footage taken at Lower Farm Primary school in Walsall is streamed to schools in the local learning network as part of their professional development strategy.