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The impact of Reading Recovery three years after intervention

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Abstract

Reading Recovery is part of the Every Child a Reader strategy to enable children to make a good start in reading. Reading Recovery is well known to have impressive effects in the shorter term, but less is known about its long-term effectiveness. The present study followed up at the end of Year 4: 120 comparison children, 73 children who had received Reading Recovery three years earlier, and 48 children in Reading Recovery schools who had not received Reading Recovery. The children who had received Reading Recovery were achieving an average National Curriculum level of 3b in reading, which indicates being on track for Level 4 at the end of KS2. The comparison children were on average Level 2a in reading, significantly below the Reading Recovery children. Reading Recovery children were significantly less likely than comparison children to be identified as having Special Educational Needs (SEN Code of Practice, 2008) at the end of Year 3. Case studies give a flavour of the children's experience of school at the end of Year 4. Early intervention was greatly appreciated by the children and parents of the Reading Recovery schools, and the lack of early intervention and its negative consequences were remarked upon by those not in Reading Recovery schools.

Background

One of the key tasks of schooling is to ensure that children become confident readers and writers, able to access the curriculum and to be prepared for the myriad of demands on their literacy skills in adult life. It is now widely accepted that children with reading difficulties should be offered early intervention, and this is supported by the evidence of its short-term effectiveness (e.g. Wasik & Slavin, 1993; Torgesen, 2000; National Reading Panel, 2000). Early intervention offers an opportunity to prevent a widening gap between poor readers and their peers as they move through school (Stanovich, 1986; Chall, 1983). Without action, poor readers read less than their peers (Allington, 1984; Biemiller, 1977-78; Clay, 1967; Juel, 1988), which in turn holds back their language development, their general knowledge and even their IQ.

The aim of Every Child a Reader (ECAR) is to target those with reading difficulties (mostly living in poverty) and make sure that they are as literate as their six-year-old peers. One measure being adopted to promote this aim is to make Reading Recovery widely available. Reading Recovery is an intensive one-to-one reading programme designed for children in their second year of schooling who are not making satisfactory progress in literacy even after high-quality classroom instruction. Evidence from the literature (Hurry & Sylva, 2007) and from a recent study conducted by Burroughs-Lange & Douëttil (2006) demonstrates the impressive effectiveness of Reading Recovery to raise reading levels for children with difficulties, both immediately post-intervention and at the end of Key Stage 1.

However, there is a shortage of information on the durability of the gains made during early interventions. This information is important in order to plan a strategy which ensures that children at risk of reading difficulties maximise their potential at the end of Key Stages 2, 3 and 4. The early developmental stages of literacy acquisition are critical in determining later success. However, other factors will also exert their influence on developing children, such as their cognitive and linguistic abilities, their behaviour and environmental factors relating to home and school. The purpose of the study reported here is to provide much-needed information on the longer-term effects of the early intervention, Reading Recovery, and to explore the experience of children with early reading difficulties as they move through primary school.

The current evaluation

The current evaluation started in 2005, with a sample of London 6-year-olds who had made a slow start in literacy. Children who had received Reading Recovery (N=87) were compared with similar children who attended London schools where Reading Recovery was not offered (N=147). The results of this evaluation have been reported as the children reached the end of Year 1 and Year 2 (Burroughs-Lange & Douëttil, 2006; ECAR, 2008). The children receiving Reading Recovery had made significantly greater progress than the comparison group at both follow-ups.

We now report on a further follow-up as the children reach the end of Year 4. We have used children's end of Year 4 National Curriculum Assessments to assess the longer-term impact of Reading Recovery on reading, writing and maths. In addition, we have conducted some mini case studies to give some insight into the broader range of issues implicated in the longer-term effectiveness of early literacy intervention.

Method

The design is a long-term evaluation comparing the literacy attainments of children who received Reading Recovery with children of similar literacy levels who did not. Children were assessed at the beginning of Year 1 (September 2005), selected children received Reading Recovery, all children were re-assessed at the end of Year 1 (July 2006), at the end of Year 2 (July 2007), and most recently, at the end of year 4 (June-July 2009). The present study reports on the children in the original study as they completed Year 4 (age 8 to 9 years), three years after the end of the intervention.

The Sample

The London boroughs

The 10 London boroughs selected for the Reading Recovery and comparison samples are among the lowest achieving in England, with very high proportions of children entitled to free school meals. These school contexts have been shown to be among the hardest for raising the achievements of the very lowest groups. In 2005, five London boroughs had Reading Recovery provision in some of their schools. In most cases this was re-activated or extended to enable a half time Reading Recovery teacher to work in selected schools through funding from the Every Child a Reader pilot. The other five London boroughs were selected to form the comparison group because they were similar in population characteristics and KS1 achievement levels. Their involvement was sought because they were to be among Local Authorities (LAs) beginning to implement Reading Recovery in 2006-07 when they would have access to Reading Recovery teacher training.

In the five LAs with Reading Recovery, on average 8.2% of children were achieving **below** the competency of a 7- to 8-year-old (Level 3) at the end of KS2, when they were 11, with a range from 6.6% to 9.5%. The five LAs with no schools with Reading Recovery averaged 8% of children **below** Level 3, with a range of 7.2% to 9.8%. This shows that the authorities were well matched in terms of overall levels of underachievement at the end of primary schooling. Both groups included some schools with much higher numbers achieving below that level. These were the schools that were recruited for the study.

The Schools

Across five London boroughs, 21 infant and primary schools were identified which in 2005-06 had a Reading Recovery teacher providing literacy intervention in Year 1. Across five London boroughs where no schools had any Reading Recovery teaching, 21 schools were nominated by the LA as of most concern for high numbers of children with poor performance in literacy. An earlier report (Burroughs-Lange & Douëttil, 2006)

documents that schools were similar in terms of: uptake of free school meals; number of children with English as an additional language; school size; and attainment of year 1 children in September 2005. In these 42 schools the eight children considered lowest in literacy, and their Year 1 classes, formed the sample for this evaluation.

The Children

The previous Reception teachers and current Year 1 class teachers and school records were consulted to identify the eight children in each class whose progress in literacy learning was of most concern.

Assessment tools were selected to measure a range of early literacy skills in reading, writing and phonic skills. The standard Reading Recovery diagnostic profile (An Observation Survey of Early Literacy Achievement, Clay 2002 (Denton et al., 2006)) and the British Abilities Scales (BAS) Word Reading Test II (BAS; Elliott, Smith & McCulloch, 1996) were used to assess the 8 lowest-achieving children in Year 1 (292 children; 145 in 21 RR schools, 147 in 21 comparison schools). This literacy profile assesses concepts about print; letter knowledge; known words in writing and phonic analysis for writing; continuous text reading in books; and word reading in isolation.

The Observation Survey (OS) and BAS word reading test were administered individually to each of the eight lowest-achieving children in a quiet space away from classroom distractions. It usually takes about half to three quarters of an hour to complete each child's assessment. All research assistants were Reading Recovery teachers previously trained in OS assessment procedures, including administering the BAS word reading test.

It was not possible to offer Reading Recovery to all the children in Reading Recovery schools. Of the 145 children in Reading Recovery schools, 87 received Reading Recovery, 58 did not. The selection of children to receive Reading Recovery is made by the teacher and teacher leader, informed by children's performance on the assessments and on age (older children are often taken first).

At first follow-up (July 2006), there was assessment data on 147 comparison children, 87 Reading Recovery children and 58 children in Reading Recovery schools not receiving intervention.

At second follow-up (July 2007), there were end-of-key-stage 1 National Curriculum Assessment data on 140 comparison children, 86 Reading Recovery children and 51 children in Reading Recovery schools not receiving intervention.

At third follow-up (June-July 2009), there were National Curriculum Assessment data on 241 children: 120 comparison, 73 Reading Recovery and 48 who were in Reading Recovery schools but not receiving intervention. By the end of Year 4, in addition to the original 42 schools, children were traced to a further 54 schools. However, 51 children were untraced, representing an attrition rate of 17%. There were similar attrition rates in each of the three groups: 18% in the comparison group, 16% in the Reading Recovery group and 17% in children in Reading Recovery schools who did not receive the

intervention. Comparison between traced and untraced children is presented in the Findings section below.

It should be noted that although the comparison children, both in Reading Recovery and non-Reading Recovery schools, did not receive Reading Recovery, as relatively weak readers it is likely that received a variety of additional help with literacy over the course of their schooling. Information on additional help has only been collected for case study children in the present study.

Measures of literacy

At baseline (September 2005), as reported above, children were assessed on the OS and the BAS word reading test. To enable analysis, a summary score has been calculated for the sub-tests of the OS (excluding Book Level) in the form of a z score, that is with an average score of 0 and a standard deviation of 1. Book Level (part of the OS) is reported separately. Children were also assessed on a word recognition and phonic skills measure (WRAPS, Moseley 2003).

At first follow-up (July 2006) children were re-assessed on the same assessments.

At second follow-up (July 2007), children were assessed on the BAS word reading test, the WRAPS and Progress in English 7 (Kispal, Hagues & Ruddock, 1994). In addition, Yr 2 end-of-key-stage 1 National Curriculum Assessments were collected for all the children through the National Pupil Database.

At third follow-up (June-July 2009), end of Year 4 teacher-assessed National Curriculum sublevels were collected for all children. These were informed by pupils' performance on the Year 4 Optional SATs tests which were used in 80 of the 82 schools contacted. Originally it had been intended to collect children's scores on the optional SATs. However, a number of problems were encountered. The SATs scores were not reported in a consistent form from all the schools: children below level 2 were typically not assessed on these assessment tasks, and some schools were unable to provide the results of their SATs tests. Especially in the schools that were not part of the original sample this threatened the completeness of the data set.

Unlike earlier measurement points, the third follow-up relied solely on National Curriculum Assessment data supplied by schools. To test the validity of these measures we explored the correlations between National Curriculum Assessments at end of Yr 2, the other literacy measurements taken at the same time, and their relationship with National Curriculum Assessments at the end of Yr 4. Only the comparison children not in RR schools were used for these analyses to avoid any contamination with intervention effects.

Table 1: Correlations (Spearman) between National Curriculum Assessments and other literacy measures: Non-RR comparison children only (N=112¹)

¹ Non-RR comparison children followed up at end Year 4 were used (N=120). There was missing data on one or more measures at Year 2 for 8 of these children, leaving a sample of N=112).

		Year 2				Year 4 NCAs		
		WRAPS	PIE7	NC read	NC write	reading	writing	math
Year 2	BAS wr	.887	.821	.833	.733	.704	.739	.482
	WRAPS		.847	.808	.708	.607	.702	.447
	PIE7			.827	.763	.648	.659	.427
	NC read				.838	.740	.681	.554
	NC write					.602	.637	.522
Year 4	NC read						.763	.589
	NC write							.589

In Year 2, the reading measures of the BAS word reading and the Progress in English 7 were highly correlated with National Curriculum Assessment reading ($r=.833$ and $.827$ respectively). These correlations were very similar to the correlations between the reading measures themselves ($r=.821$). This supports the validity of the National Curriculum Assessment measures in the current context. Correlations between the BAS word reading test in Year 2 and National Curriculum Assessments in reading and writing in Year 4 were also fairly robust ($r=.704$ and $.739$ respectively), as were the correlations between the Progress in English test and National Curriculum Assessments in reading and writing in Year 4 ($r=.648$ and $.659$ respectively). This supports the Year 4 National Curriculum Assessments as providing valid measures of reading and writing. The levels (ranging from below Level 1 to Level 4a) have been converted to National Curriculum point score equivalents (Appendix 1) for all statistical analyses. The National Curriculum Assessments represent an ordinal level of measurement, but such measures are typically analysed using multiple regression, as this form of analysis is sufficiently robust to cope with such data where the sample size is over 200.

Background data were collected on each child at baseline, on: uptake of free school meals; English as an additional language; gender; age. Data on the children's Special Needs Status was collected from the Pupil Level Census for Spring 2008(the most recent available data)t.

The case studies

In order to explore the views of children, parents and teachers, and to gain further insight into the longer-term consequences of early literacy intervention, or the lack of it, mini-case studies were conducted in four of the original schools, two Reading Recovery, two non Reading Recovery. Schools were considered for selection where the majority of the sample children were still attending the school. The schools were reasonably well matched on intake (Table 2, school names are aliases).

Table 2: Case study schools

	% Free School Meals	% English Additional Language	On roll
Reading Recovery			
Agincourt	26	47	350

St Patrick's	40	50	300
Non Reading Recovery			
Bosworth	33	57	250
Nuthatch	42	39	300

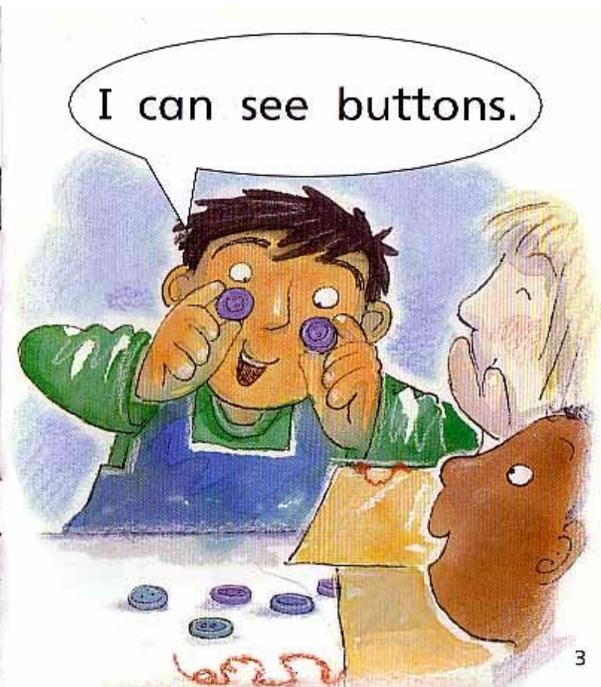
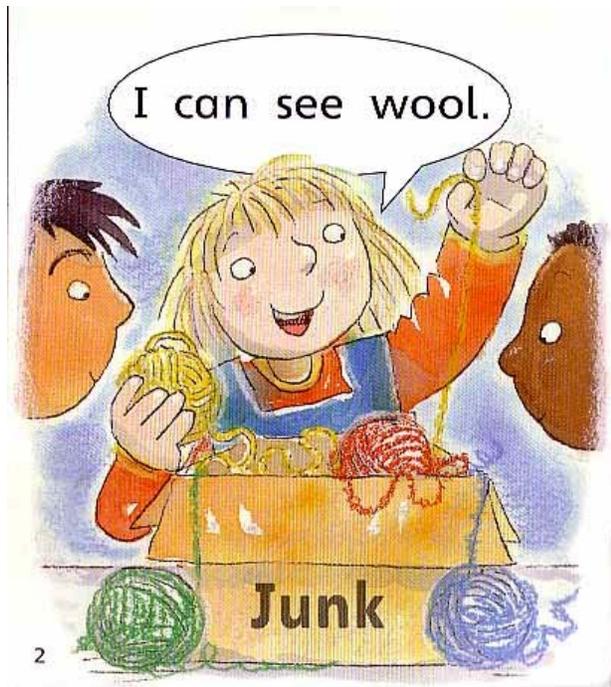
In each school researchers spoke to children from the original sample, their class teachers, the SENCo, the Reading Recovery teacher (where relevant) and parents (where possible). Fifteen children were interviewed in school (4 in each of the RR schools and in Bosworth, 3 in Nuthatch). Nine parents were interviewed on the telephone (4 and 3 in the RR schools respectively and 2 in Nuthatch). Other parents either did not agree to be interviewed or were not contactable.

Questions were asked about children's reading in the following areas: their enjoyment, confidence, reading in and out of school, their ability, any extra help with reading or other areas of the curriculum. Researchers also asked children to read from their reading book.

Findings

Baseline - Autumn 2005

As previously reported (Burroughs-Lange & Douëtil, 2006), the children in this study tended to be economically disadvantaged, with just over half taking free school meals, and to have English as an additional language (48%) (Table 3). The majority were effectively non-readers at baseline, 50% not scoring at all on the BAS word reading, and 81% either not reading or only able to read the most basic level books, such as the one illustrated below. They did have some skills in place, such as some letter knowledge, early concepts about print and so forth.



Page from a Level 1 book

Table 3: Baseline characteristics of sample children re-contacted in Y4, by group

	% Free School Meals	% English Additional Language	% no score BAS wr	% at or below Bk level 1	OS z-score Mean (sd)	WRAPS score Mean (sd)
Comparison children (n=120)	63%	55%	57%	91%	-.030 (.95)	10.6 (5.9)
Reading Recovery children (n=73)	44%	47%	34%	72%	.137 (.88)	11.6 (6.3)
Comparison children in RR schools (n=48)	52%	35%	54%	69%	-.032 (1.25)	12.0 (10.2)
Total (N=241)	54% *	48%	50% **	81% ***	.020 (1)	11.2 (7.1)

* p<.05

**p<.01

***p<.001

At baseline there were significant demographic differences between the three groups of re-contacted children on uptake of free school meals (chi-square=6.84, 2, p<.05), a higher proportion of the comparison group taking free school meals. There were also significant group differences in baseline literacy, with the comparison children on average scoring lower on the BAS word reading test (chi-square=10.01, 2, p<.01) and Book Level (chi-square=10.92, 2, p<.01). However, both these measures are crude at baseline as half or more children do not score. On the more sensitive measures for children at this level, the OS and the WRAPS, there were no significant differences. For the OS, scores were standardised to a mean of 0, so positive scores show higher than average scores, negative scores lower than average scores. Any group differences were controlled for in the 2006 and 2007 analysis of the children's progress, and in the current

study.

The comparison children in the Reading Recovery schools were somewhat weaker than the Reading Recovery group on literacy at baseline, significantly so for the BAS word reading (chi-square=6.38, 1, $p < .05$).

Table 4: Comparison between traced and untraced children

Sample	N	% Free School Meals	% English Additional Language	% no score BAS wr	% at or below Bk level 1	OS Z score Mean (sd)	WRAPS score Mean (sd)
Comp. traced	120	63%	55%	57.5%	91.5%	-.01 (1)	10.7 (6.0)
Comp. untraced	27	50%	46%	46%	75%	0 (1.1)	13.4 (6.6)
RR traced	73	44%	47%	34%	72%	.14 (0.9)	11.6 (6.3)
RR untraced	14	43%	57%	43%	92%	-.40 (.5)	8.6 (6.2)
Comp in RR traced	48	52%	35%	54.2%	69%	-.03 (1.2)	12 (10.2)
Comp in RR untraced	10	40%	20%	70%	80%	.05 (1.3)	11.3 (8.0)
Total traced	241	55%	48%	50%	80%	.02 (1)	11.2 (7.1)
Total untraced	51	46%	44%	50%	81%	-.10 (1)	11.7 (6.9)

Reassuringly, taking the sample as a whole, the children who were untraced did not differ significantly from those traced, either on demographic factors or literacy levels (Table 4)². Taking each group separately, on the whole traced and untraced were similar but for the comparison children in non Reading Recovery schools, the untraced group scored significantly higher at baseline than the traced group on Book Level (chi-square=6.007, 1, $p < .05$) and WRAPS ($t=2.070$, 145, $p < .05$).

Summer 2009 Follow-up

At the end of Year 4, comparison children in non Reading Recovery schools (N=120), comparison children in Reading Recovery schools (N=48), and Reading Recovery children (N=73) were compared. Table 5 presents the average levels for each of the groups. To provide more precision these are also expressed in National Curriculum point score equivalents, in the form of means and standard deviations. Group differences were tested for statistical significance using multiple regression, controlling for any group differences at baseline (OS score, BAS score, Book level, free school meals and English as an additional language).

² Comparing total traced with total untraced: FSM chi-square=.236, 1, ns; EAL chi-square=.572, 1, ns; BAS chi-square=.978, 1, ns; Bk level chi-square=.908, 1, ns; OSZ $t=.418$, 291, ns; WRAPS $t=.776$, 291, ns

The Reading Recovery children were still doing significantly better in reading ($\beta=.200$, $p<.001$) and writing ($\beta=.184$, $p<.002$) than the other two groups. The differences between the Reading Recovery children and the comparison children in non Reading Recovery schools were the greatest (reading, $\beta=.231$, $p<.001$ and writing, $\beta=.207$, $p<.001$). The Reading Recovery children had reached an average of 3b in reading and 2a in writing, ahead of the comparison children in non Reading Recovery schools by just under half a National Curriculum level in reading and a third of a level in writing. The comparison children in Reading Recovery schools were in the middle. They were doing better than the comparison group in non Reading Recovery schools, though not significantly so. They were not doing as well as children who had received Reading Recovery, but again differences were not statistically significant when assessed using the same multiple regression models. This suggests that there may be some wash-over effect for children in Reading Recovery schools, even though they do not receive the intervention. There were no significant group differences in maths.

Table 5: Mean National Curriculum Assessments levels and point score equivalents at the end of Year 4, by group

Group	N		Reading	Writing	Maths
Comparison children	120	NC level	2a	2b	2a
		mean point score	18.21	16.43	18.39
		s.d.	5.20	4.55	4.49
Reading Recovery children	73	NC level	3b	2a	2a
		mean point score	20.14	18.75	18.92
		s.d.	4.27	3.94	3.44
Comparison children in Reading Recovery schools	48	NC level	3c	2a	2a
		mean point score	19.21	18.75	17.46
		s.d.	6.25	3.94	5.19

Special Educational needs status

At baseline, very few children in the study had statements of special educational need: 5.4% (N=8) of the comparison group, 11.5% (N=10) of the Reading Recovery group and 8.6% (N=5) of the comparison children in Reading Recovery schools. Between-group differences were not statistically significant. In the spring of 2008, when the children were at the end of Year 3 data was available through the Pupil Level Census on 267 of the original 293 children. Few children had a statement of special educational need, but quite a number were on stages one (school action) or two (school action plus) of the Special Needs Code of Practice (2008) (Table 6). Reading Recovery children were receiving significantly less special provision than children in the other two groups (chi-square=15.228, 6, $p<.05$)

Table 6: Special Educational Needs Status at the end of Year 3

	N	No special provision	School action	School action plus	Statement of SEN
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Comparison children	134	48% (n=64)	32% (n=43)	19% (n=25)	1.5% (n=1)
Reading Recovery children	81	61% (n=49)	26% (n=21)	12% (n=10)	1.2% (n=1)
Comparison children in RR schools	52	42% (n=22)	21% (n=11)	29% (n=15)	7.7% (n=4)

The Case Studies

Agincourt (Reading Recovery school)

Agincourt is a lovely school to visit, full of students' work, attractively displayed, with well-behaved and helpful pupils and a leafy environment created by the school. It's recent 'good with outstanding elements' OFSTED, and the steady improvement in KS2 SATs, reinforce the sense of an effective school. "From starting points that are well below expectations for their age, pupils reach standards that are slightly above average in English and science at the end of KS2" (OFSTED, 2009). Regarding Reading Recovery, one teacher commented that "Reading Recovery is an essential part of what's provided by the school". The pupils and parents we spoke to were unanimous in their appreciation of the programme. However, in the context of a pupil who had experienced a dip in Year 3 (Mark), his teacher commented: "We are aware the children with RR may need continued 1:1 support. RR.....boosts children because they've been tutored 1:1. At year 2 children emerge above average but they are average children and they don't come at a high enough priority to get intervention then."

Willy remembers his Reading Recovery sessions as 'helpful and fun', although also commented that 'you found out there were lots of boring books in the world'. His mother felt they made a 'huge difference' to his reading and writing. In Year 4 Willy is a good reader and his teacher comments that he has no problems in accessing the curriculum (National Curriculum Assessments 4b in reading, 3b in writing), no longer in need of any additional support. Willy is still not overly enthusiastic about reading but he reads every day in school and owns up to liking funny books such as Captain Underpants and Horrid Henry and sending silly text messages to his sister.

Freddy is ambivalent about reading, enjoying certain genres, such as fantasy and travel but disliking 'too many hard words'. He reads daily in school and every other day at home. He talks enthusiastically about a story he is writing on the computer with his Dad about coming from Nigeria to London. While his decoding and comprehension are improving, his teacher does not consider him to be at National Level (National Curriculum Assessments 3c in reading, 2b in writing) and, if we assume a level gain in the two years he has left in KS2, he should achieve a Level 4 in reading but not writing. Freddy is trilingual with some speech problems. The English he uses at home is quite basic. He is receiving additional help in school, principally to support his language development, but his teacher also has concerns that he may be dyspraxic.

Mark really enjoys reading, especially non-fiction because "it's more packed full of information...it teaches you things". Following a bit of a dip in Year 3, his teacher considers him to be a good reader with no need for further additional support in accessing the curriculum (National Curriculum Assessments 4b in reading, 3c in writing).

His mother comments that the Reading Recovery teacher “helped him a hell of a lot”. She says: “Mark is a very confident reader, learning all the time. He likes to read to himself – information books, encyclopaedias, books he brings home from school. He reads if he can’t sleep.”

Mia does not speak English at home and has serious problems with the English language which limit her ability to understand what she is reading. Her language problems are likely to reflect underlying cognitive difficulties. She made many errors while reading. Although she can “sound it out”, her inability to call upon vocabulary, understanding and syntax to help her meant that errors went uncorrected. Mia and her mother both report she likes reading, though her teacher is under the impression she is not a keen reader because of her decoding problems. Mia reads at home, but at school the teacher comments on difficulties with finding appropriate books. “Decoding is difficult with the language barrier. She is quite slow, but if she is given easier books she thinks they are babyish.” Mia is not able to securely access the curriculum (National Curriculum Assessments 2a in reading, 2a in writing) and reads in a group daily with the Teaching Assistant (TA) who also helps her access the curriculum, e.g. helping with a maths problem.

St Patrick’s (Reading Recovery school)

St Patrick’s Roman Catholic Primary school provides a safe and effective environment for its pupils, with an overall ‘good’ in its OFSTED inspection 2008 and ‘outstanding’ for personal development and wellbeing. Pupils do well at the end of KS2, especially bearing in mind the high uptake of free school meals and pupils for whom English is an additional language: 85% achieving Level 4 in English. The school has a number of literacy systems in place: Renewed Primary Literacy Strategy (RPLS) one hour daily throughout school (some sessions 1½ hours for older children), plus additional Guided Reading. A “catch up programme” is provided for weaker readers in Years 2-6, delivered by trained TA’s. Reading Recovery is still active. As in Agincourt, pupils and parents interviewed were uniformly very positive about Reading Recovery. The RR teacher and the deputy are concerned that RR “exists in an SEN withdrawal bubble and does not reach class teachers”. They are planning for the RR teacher to take a more whole-school role, disseminating RR ideas through the school and introducing levelled books in classrooms. Currently Year 4 children have free choice of books in the classroom, many of which would not be at instructional level. The RR teacher runs a homework club supporting older children, particularly those she knows well from RR whose families she also knows well.

Max is an enthusiastic and confident reader, though there are concerns about his ability. He reads widely at home, books, newspapers and comics. His teacher confirms that he loves to read and that his knowledge has improved. However, although he is about the 40% level for his class, with National Curriculum Assessments levels 2b in reading, 2a in writing, there is clearly some cause for concern. Max is not receiving extra help with reading but is on School Action Plus, mainly because of behavioural issues, but also because of problems with speech and language. He currently attends a group once a week to work on behaviour. He has received speech and language support, but the Deputy Head questions its quality as this is delivered by a TA who only went on a short

course. Max's mother is very concerned and believes that in terms of his speech and language problems there is lack of qualified support and feels he is not being followed up properly and not getting good continued support. She worries about his future.

Danny enjoys reading at home and school. His teacher considers that he is doing fine in class, can access the curriculum and is no longer in need of extra support (National Curriculum Assessments 3a in reading, 2a in writing). He does however benefit from the lunchtime homework club run by his old Reading Recovery teacher.

Michael wants to read but finds it hard and this takes away from his enjoyment. His class teacher also comments that Michael is motivated but is in the bottom 20% of the class for reading (National Curriculum Assessments level 2a in reading, 2b in writing). His lack of reading ability has an impact across the whole curriculum. He wants to read the same books as the other children so he takes them home. However, the Reading Recovery teacher feels that his mother tends to 'jump in too quickly' to read for him and is therefore not really supporting Michael's learning. He is on School Action, with general learning difficulties. In Year 3 Michael was in a group of 15 less able children for the literacy hour, with a teacher and a TA. It was hoped that this would enable children to receive greater individual support and allow tasks to be better differentiated. However, the teacher was newly qualified, and most of the children had both behaviour and learning difficulties. The group was not very successful and for the whole year Michael was not with his class group for literacy. In Year 4 he learns literacy with his class but receives a range of additional help. He works in group of 4 children twice a week for about an hour with a trained TA doing phonics, handwriting and preparation for comprehension work to be done with whole class. At lunchtime he attends a Springboard group and also has individual Maths catch-up once a week.

Bernardo is doing well in literacy, in the top 25% of the class (National Curriculum Assessments level 3c in reading, 3b in writing) and confidently accesses the whole curriculum. He enjoys reading books such as the Harry Potter and Narnia books and reading the Bible. His mother comments that Reading Recovery was very helpful, and he also benefited from working with a TA in Year 3. He is now a confident and able reader, reading most evenings before bed and enjoying school.

Nuthatch (Comparison school)

Nuthatch has a relatively disadvantaged intake which is also fairly mobile. In its last OFSTED it received a 'satisfactory' overall grade and only 67% of children achieved Level 4 in English at the end of KS2. In terms of literacy, at KS1 they concentrate on Sounds~Write, a programme of systematic daily phonics work and levelled phonic reading books. In KS2 less able children continue with phonics in small groups led by a well-trained TA. Children with SEN see a qualified teacher for individual and group support.

Andy finds reading boring, "a waste of time". His reading is very poor for his age (National Curriculum Assessments level 1a in reading, 2b in writing) and his teacher says that he has recently been diagnosed with severe dyslexia. He is embarrassed about his reading and tries to cover up some of his problems. His Special Needs teacher

comments: "He is an intelligent boy, his comprehension is good, but he is not interested in the phonic books he is reading with me and TAs. Trouble is, he can't manage other books without lots help." He is now on School Action Plus, with diagnoses of dyslexia and Autistic Spectrum Disorder. Mum thinks that if school had recognised his learning difficulties early on and put support strategies in place, he would not be so far behind with his reading. "He likes school but there was a phase when he didn't as the other children said he was behind. He misbehaves rather than let the other children know he can't do the work."

Dixon was identified with SEN in Nursery, with speech therapy needed for tongue protrusion and a lisp, two operations for glue ear, language problems, poor co-ordination and balance, gross and fine motor problems. He is on School Action Plus. At the end of year 4 his literacy is of concern (National Curriculum Assessments level 1b in reading, 1b in writing). He reads in a small group with the SEN teacher twice a week and always has TA support in class, 15 hours a week mostly one-to-one for him. However, Dixon's mother comments that "He didn't get much help before this year with reading and writing... There's definitely not enough reading being done in the school. If they got the reading and writing in the Infants instead of the rest of the curriculum they wouldn't have so many problems in the Juniors."

Luke is on School Action plus and is below Level 1 in both reading and writing. His mother also has severe difficulties with reading. He comments that "I am nearly good at it, but I don't get on OK in class. It is a bit hard so I look at pictures instead." His teacher says he finds all work daunting but "his confidence has come a long way and he will participate in class and does volunteer answers." His objective is to see himself as a reader. Luke works with the TA for 15 minutes, four times a week, mainly on reading but also on word and letter skills. He also works with the SEN teacher for 30 minutes twice weekly. In addition to Luke's learning difficulties he has challenging behaviour and the school reports problems in the family, with no structure or routines at home.

Bosworth (Comparison school)

Bosworth is a fairly small school with a high proportion of minority ethnic communities, high uptake of free school meals and children for whom English is an additional language well above the national average. There is also much temporary housing locally, so children come and go. SATs results for Y6 2008 were well below national averages, with 70% achieving Level 4 in literacy. The latest OFSTED was "satisfactory" overall. In literacy, the whole school took on the Read Write RML (Ruth Miskin) 4 years ago, and it replaced the literacy hour for 4 terms. It did bring reading scores up but it was felt that it limited vocabulary and the range of books children were reading. At Foundation and KS1 the school now uses Communication, Language and Literacy Development (CLLD) and adapted the materials from RML. In KS2 they use the Book Power approach (Centre for Literacy in Primary Education), a whole-book approach to develop reading, vocabulary and comprehension, and this is the focus for much of the work done in class. RML is used for individual "catch up", alongside materials from Sparkle Box.

Bergita enjoys reading and reads well in class and at home to her baby brother. She reads with obvious enjoyment and good comprehension. Her teacher considers her to be above the class average in reading and average in writing and maths (National Curriculum Assessments level 3a in reading, 2b in writing). In Year 3 she was given additional help, using RML, and her confidence grew during this time. Her class teacher comments that her confidence has improved further in Year 4 and is now able to access the curriculum securely.

Nemo likes reading and reads regularly at home and school. He reports that his reading has improved “and it came in handy when I was doing a test; I knew everything that had to be done.” He received extra support in Year 2 on RML which he said helped him, and says that he no longer needs any extra help. He is in the middle of the class for reading and writing (National Curriculum Assessments 2b in reading, 2b in writing). He is in the top set for maths.

Zitar is on School Action and is withdrawn daily in a group of seven children for RML with a very experienced TA. Her reading (National Curriculum Assessments 2c) and writing (2b) are cause for concern at this stage, although not drastically below the class average, which is fairly low. Turkish is her home language and she still needs help with grammatical structures in English. Her class teacher feels that she is a bit of a daydreamer and lacks focus, though Zitar reports that she likes reading and is pleased to have moved onto chapter books.

Gulshan enjoys reading and feels quite confident. Her class teacher confirms that she is about average for the class (National Curriculum Assessments 2a in reading, 2b in writing) and she does not receive any extra help. Gulshan is on School Action, but mainly for behavioural/emotional reasons. She is very easily frustrated and annoyed.

Discussion and conclusions

A number of interesting points emerge from the case studies:

Reading Recovery was very strongly endorsed by the children and their parents and in at least one of the comparison schools the lack of systematic early intervention was identified by parents as heavily contributing to their children’s difficulties in Year 4.

The children in the Reading Recovery schools were doing better on average than the children in the comparison schools, both the children in our sample and their classmates. There was considerable variation in attainment in the children interviewed, even within one school, with some doing very well and others struggling, but there was also considerable variation between schools, level 2a/b being considered average in Bosworth but cause for concern in another.

Children who were achieving a level 3 were usually confident readers, able to access the rest of the curriculum; those at level 2 or even 1 were finding school more difficult. Books that they could read they found boring and “babyish”. They were reading less

than their more able peers, both in terms of volume and sophistication. Being a poor reader led to embarrassment, humiliation and even to depression, according to one mother. As yet, all the children still seemed fairly engaged with school, but conditions were developing where they might begin to feel alienated.

A number of the children had a range of problems which continued to exert an influence on their reading, suggesting that early intervention cannot be expected to prevent all later difficulties with reading. Children had general learning difficulties, speech and language problems, emotional and behaviour problems and difficulties at home, all of which impacted on their learning.

The complex relationship between special provision and the classroom was illustrated in a number of ways. In St Patrick's there was an issue with the use of graded texts. In Reading Recovery children were able to read books well-matched to their reading abilities. However, books were not levelled in Year 4 classrooms and this led to a number of children reading books that were either much too easy or much too hard. Also in St Patrick's children were withdrawn in a large group according to reading ability. Poor readers worked together with an inexperienced teacher whilst missing the literacy in class, a procedure likely to lead to widening gaps. In general, much of the additional support that poor readers received was from TAs, sometimes well-trained but not always. This is a familiar practice but not necessarily a very effective one. Note that the children in this study, who were all poor readers at age six, had often received a mix of extra help with literacy by the end of Year 4.

Consistent with the case studies, the quantitative comparisons showed that those who had received Reading Recovery were doing significantly better in reading and writing at the end of Year 4 than similar children who attended schools where Reading Recovery was not available. On average, Reading Recovery children were just under half a National Curriculum Assessment level ahead in reading and a third of a level in writing. The comparison children in Reading Recovery schools were in the middle, better than the children in non-Reading Recovery schools but not as good as the Reading Recovery group, suggesting that Reading Recovery has some whole school effect. There were no significant group differences in maths.

Children in the non Reading Recovery schools were significantly more likely to be on some level of the SEN Code of Practice at the end of Year 3 than children who had received Reading Recovery. This has both emotional implications for the child and their family but also financial implications for the school and the Local Authority.

Conclusions

These findings indicate that effects of Reading Recovery are still apparent at the end of Year 4. However, the case studies illustrate that some children with early reading difficulties have a range of other problems associated with general cognitive abilities, language, behaviour and home environment. We therefore cannot afford to be complacent. Weak readers in Year 4 were still on the whole well integrated in school but there were indications that they were beginning to feel alienated from learning.

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Appendix 1

National Strategy Sublevels: point score equivalents

(<http://nationalstrategies.standards.dcsf.gov.uk/node/169521>. Accessed 09/11/09)

Level	Point score
1c	7
Level 1	9
1b	9
1a	11
2c	13
Level 2	15
2b	15
2a	17
3c	19

Level	Point score
Level 3	21
3b	21
3a	23
4c	25
Level 4	27
4b	27
4a	29

Many schools are finding that by assessing pupils using National Curriculum sublevels on a regular basis, pupils who are making less than satisfactory progress are quickly identified and support for them can be given. A common way of dividing the National Curriculum levels is the use of an a, b, c indicator:

- a – represents strong level;
- b – represents sound level;
- c – represents a weak level.

So a pupil would progress from 1a, into 2c, then 2b to 2a.

This table provides a handy reference to look up point score and level/sublevel equivalents.

Caution should be used with sublevels as the National Curriculum level was designed to indicate representative attainment at the end of a key stage, a sublevel only gives a indication of the certainty of this achievement but can be extremely useful in identifying progress and support requirements. For calculation purposes some schools have represented levels as decimalised values.