

# What works for children and young people with literacy difficulties?

The effectiveness of intervention schemes



Fourth edition

Greg Brooks

Emeritus Professor of Education University of Sheffield



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# Publishing history

The first edition of this report was Brooks, G., Flanagan, N., Henkhuzens, Z. and Hutchison, D. (1998). *What Works for Slow Readers? The Effectiveness of Early Intervention Schemes*. Slough: NFER.

The second edition was Brooks, G. (2002). *What Works for Children with Literacy Difficulties? The Effectiveness of Intervention Schemes*. London: DfES Research Report no. RR380.  
<http://dera.ioe.ac.uk/4662/>

That edition formed the basis of Enters, I. and Brooks, G. (2005a). *Boosting Reading in Primary Schools*. London: Basic Skills Agency. A bilingual Welsh/English version of this was published as Enters, I. and Brooks, G. (2005b). *Hybu Darllen mewn Ysgolion Cynradd/Boosting Reading in Primary Schools*. Llundain: Yr Asiantaeth Sgiliau Sylfaenol/London: Basic Skills Agency.

Both the second edition and the Enters and Brooks spin-off fed into the third edition: Brooks, G. (2007). *What Works for Pupils with Literacy Difficulties? The Effectiveness of Intervention Schemes*. Third edition. London: DCSF. <http://www.nieku.com/~spld/assets/documents/Greg-Brooks.pdf>

Next came Brooks, G. (2009). *Beth sy'n gweithio gyda disgyblion yng Nghymru sydd â phroblemau llythrennedd? Effeithiolrwydd cynlluniau ymyrraeth/What Works for Pupils in Wales with Literacy Difficulties? The effectiveness of intervention schemes*. Leicester: NIACE.

Welsh text online at <http://new.wales.gov.uk/topics/educationandskills/publications/guidance/whatworksforpupils/?skip=1&lang=cy>

and English at <http://new.wales.gov.uk/topics/educationandskills/publications/guidance/whatworksforpupils/?skip=1&lang=en>

This drew on and referred to Brooks (2007), but dealt only with a small number of schemes with separate evidence of effectiveness in Wales, including three with Welsh-medium versions.

This fourth edition draws selectively on all the above. Some schemes have been dropped and others added – see [section 1.4](#).

## Acknowledgments

I wish to record my deep gratitude to all those who provided information for this edition, not all of which, sadly, could be used.

And above all to Mel Byrne of The Dyslexia-SpLD Trust for having commissioned this edition and her long patience in waiting for it to be delivered, and to her colleagues Sarah Hanna and Sharanjit Sahi for their support.

Greg Brooks, Walton-on-the-Hill, Surrey, September 2012

# New structure and content of this edition

Like all three previous editions (see the publishing history, [p.8](#)), this edition provides information on intervention schemes for children who struggle with reading and writing.

But unlike the previous editions, this one is in two distinct parts.

Part 1 is the descendant of the previous editions: it deals with schemes for children aged 5–14 (Years 1–9 in England and Wales) who can be considered 'mainstream', that is, they have not been identified as having a specific special educational need, and are not at the point of transition from primary to secondary school. Part 1 contains 23 schemes retained from the third edition, and nine new ones.

Part 2 is almost entirely new: it attempts to go beyond schemes for mainstream children as just defined, to other categories of intervention which have so far largely suffered from neglect. So in Part 2 you will find chapters on schemes designed:

- for children with specific special educational needs, including dyslexia/specific learning difficulty ([chapter 4](#))
- to boost literacy at primary/secondary transition ([chapter 5](#))
- for young people aged 14–18, including those detached from education or training and those who have offended or may be at risk of doing so ([chapter 6](#)).

The three new chapters in Part 2 contain details of 21 schemes which did not feature in the third edition, plus one scheme and three studies which were in the third edition but have been moved to the chapter on children with specific special educational needs.

The criteria for inclusion of schemes are different in the two parts. The stricter ones for Part 1 are explained in section 1.3, the more lenient ones for Part 2 on the introductory page to that part of the report ([p.72](#)).

# Part One: Mainstream Schemes

# Chapter one

## Focus and intention of this part of this report

### 1.1 The focus

Most children learn to read and write satisfactorily first time through home support and/or high-quality classroom teaching, but what of those children who haven't? How are they to be helped? This research report reviews intervention schemes that have been devised to help struggling readers and writers, and is intended to inform schools' and other providers' choices among such schemes.

More exactly, Part 1 of this research report addresses the following questions:

- What intervention schemes have been used in the UK in an attempt to boost the reading, spelling or overall writing attainment of lower-achieving mainstream pupils in at least one of Years 1–9, and have been quantitatively evaluated here?
- What are those schemes like, and how effective are they?

The restriction to schemes used and evaluated in the UK is partly intended to avoid a deluge of information on schemes used elsewhere in the world, but mainly to circumvent the objection, 'How do we know that it will work here?' (However, for reviews taking in some evidence from other English-speaking countries, especially the United States, see Hurry, 2000; Slavin *et al.*, 2008, 2009, 2011.)

The intention is to make clear and analytic information on such schemes available in order to inform practice and choices of approach. Those choices should be guided not only by the evidence assembled and analysed here, but also by careful matching of the needs of an individual school, class or child to the specifics of particular schemes – for signposts on this see [chapter 2](#).

Most of the schemes covered are 'Wave 3' initiatives as previously defined within the literacy section of the Primary National Strategy and the Key Stage 3 Strategy for English in England (see [Box 1.1](#) on the next page), though some are also in use as Wave 2 initiatives.

Within that structure, there is an obvious need for schools to have clear information, in order to make principled decisions about which approach to adopt for children who experience difficulties in literacy.

## **Box 1.1: The Three Waves**

Effective inclusive provision has been summarised in the National Strategy 'waves' model, which describes a strategic approach to teaching and additional intervention designed to minimise underachievement for all learners. The 'waves' model can be extended to incorporate additional challenge for all learners, including gifted and talented learners, and can be used as a strategic approach to developing the broader idea of personalisation.

### **Wave 1 – Quality First Teaching**

High-quality inclusive teaching is supported by effective whole-school policies and frameworks, clearly targeted at all learners' needs and prior learning. This teaching needs to be based in planning and schemes of work that are designed to move all learners from where they are to where they need to be. Where there are large numbers of learners who share the same learning needs, the best solution is to adjust the planning to cater for them. It means setting a new trajectory for the learning programme to take learners to where they need to be in terms of age-related expectations. Effective Wave 1 teaching anticipates the needs of learners based on good use of yearly transition data and information.

When applied to early reading, this means the provision of a rich language curriculum that fosters all four interdependent strands of language – speaking, listening, reading and writing – while providing access for all children to high-quality phonic work as part of Quality first teaching.

### **Wave 2 – Wave 1 plus additional, time-limited, tailored intervention support programmes**

Wave 2 provision is designed to increase rates of progress and secure learning for groups of learners that puts them back on course to meet or exceed national expectations. This usually takes the form of a tight, structured programme of small-group support that has an evidence base of impact on progress. This support is carefully targeted according to analysis of need and is delivered by teachers or teaching assistants (TAs) who have the skills to help learners achieve their learning objectives. The progress of learners is closely tracked for impact. This support can occur outside (but in addition to) whole-class lessons, or be built into mainstream lessons as part of guided work. Critically, intervention support needs to help children and young people apply their learning in mainstream lessons, and to ensure that motivation and progress in learning are sustained. The outcome of Wave 2 intervention is for learners to be back on track to meet or exceed national expectations at the end of the key stage.

### **Wave 3 – Wave 1 plus increasingly individualised programmes, based on independent evidence of what works**

Expectations are to accelerate and maximise progress and to minimise performance gaps. This may involve support from a specialist teacher, highly trained teaching assistant or academic mentor delivered one-to-one or to small groups to support learners towards the achievement of very specific targets.

## 1.2 The scale of need

What proportion of children experience literacy difficulties? Estimates for England can be based on the results of National Curriculum assessments. Table 1.1 gives the percentages of children not yet achieving level 2 in reading at the end of Key Stage 1 (age 7), and not yet achieving level 4 in English at Key Stage 2 (age 11), in 2007–11.

**Table 1.1: Percentage of children in England achieving below level 2 in reading in Key Stage 1 National Curriculum teacher assessments, or below level 4 in English in Key Stage 2 national tests, 2007–11**

Year	Key Stage 1 Percentage	Key Stage 2 Percentage
2007	16%	19%
2008	16%	18%
2009	16%	20%
2010	15%	19%
2011	15%	19%

Thus, significant numbers of children experience literacy difficulties and are likely to have difficulty in coping with the steadily increasing demands of the curriculum in Key Stage 3 and beyond, and of life in the digital age.

So what can be done for children who struggle with reading and writing? As in the third edition, the main focus in this part of this review is on interventions for mainstream children aged 5–14 (Years 1–9), where ‘mainstream’ means principally that they have not been identified as having dyslexia/SpLD or any other specific special educational need, and are not at the point of transition from primary to secondary school. Schemes for children and young people in those categories are the subjects of two of the chapters in Part 2 of this edition.

## 1.3 Criteria for inclusion of mainstream schemes

There are at least 80 intervention schemes designed to boost the reading and/or spelling and/or writing of mainstream children as just defined that have quantitative evaluation data from the UK covering at least one year group in Years 1–9. In the previous edition, all the 48 schemes I knew of which met that description and from whose data an impact measure could be calculated were included, with a description in **chapter 3** and an analysis of the quantitative data in the Appendix. For this edition the criteria for inclusion of mainstream schemes have been tightened up considerably, for the following reasons.

In 2010, when The Dyslexia-SpLD Trust commissioned this edition, it also set up a website: [www.interventionsforliteracy.org.uk](http://www.interventionsforliteracy.org.uk), for which I wrote the section on interventions. The site provides guidance for parents and schools seeking effective interventions. We decided that it would not make sense to put all 48 schemes from the third edition on the site because (for example) some are no longer available, and others did not have strong evidence of effectiveness. Of the 25 schemes featured on the site in 2010, 23 were included based on the 2007 edition of this review and on the criteria stated below. Information on the other two schemes, Sound Reading System and Write Away Together, became available after the 2007 edition was written, but met the criteria stated below, and were therefore featured. The Trust’s intention was that the analysis for this edition would establish which further schemes should be added to the site, and indeed which should be removed. All those described and analysed in this part of this edition have been or will be added, plus a few from Part 2. Other schemes will be added to the site (though not to this edition) if they provide evidence meeting the criteria.

The criteria applied for inclusion of mainstream schemes in this edition are:

- the scheme must be a catch-up intervention, and not an initial and/or preventive scheme
- the scheme must be currently available
- the scheme's quantitative data must come from one or more studies in the UK
- the scheme's evidence of effectiveness must be based on pre- and post-test data from an appropriate test(s)
- if the data come only from a treatment group, the test(s) must have been given to a sample of at least 30 children, this being the minimum number considered by statisticians to allow reliable statistical findings
- but if the data come from studies with more rigorous designs (randomised controlled trials, or quasi-experiments with well-matched treatment and comparison groups), the minimum sample size can be smaller
- it must be possible to calculate an impact measure (ratio gain (RG) or effect size) from the data – for details on these measures see the [Appendix to Part 1](#)
- the scheme must have shown, in at least one study, a RG of at least 2.0 or an effect size of at least 0.5, that is, at least reasonable effectiveness (though a few randomised controlled trials with smaller effect sizes have been included because of their rigorous design).

A number of schemes included in the third edition no longer appear in this one, for the following reasons:

- Three that are initial and/or preventive (and which therefore always sat uneasily in a book on catch-up schemes): Family Literacy, Sounds~Write, Time for Reading. However, in [chapter 4](#) I have included a few reflections on where the early identification of children who may struggle, and attempts to prevent that happening, have got to
- Eleven that are no longer available: Early Literacy Support, Further Literacy Support, Improving Spelling by Teaching Morphemes, Individual Styles in Learning to Spell, Integrated Learning Systems, Interactive Assessment and Teaching, Literacy Acceleration, Multi-sensory Teaching System for Reading, Parental Involvement in Reading in Haringey, Reader's Intelligent Teaching Assistant, Somerset Self-esteem and Reading Project. (One or two of these may still be available, but attempts to get new information from their authors failed.)
- Three whose only quantitative evidence comes from one-group studies with a sample of fewer than 30 children: Direct Phonics, Phonological Awareness Training, The Accelerated Reader
- Six that do not have even one study showing reasonable effectiveness as defined above: Five-Minute Box, Philosophy for Children, Rapid Reading, SPELLIT, The Early Reading Research, The Secondary Reading Research.

For anyone wishing nevertheless to follow up the details of these 23 schemes, they are all still logged in the third edition.

Two schemes which focus on children with specific special educational needs - Personalised Learning (now known as Personalised Learning for Reading/Writing), and Phonology with Reading - have been moved to [chapter 4](#), as have one study of Phono-Graphix®, and one within the Reading Intervention series (where Phonology with Reading also now sits).

Thus, of the 48 schemes that featured in the third edition, 23 have been retained in Part 1 of this edition – though in some cases where schemes had evidence from more than one study, some of the evidence has

been dropped (because of small samples and/or low impact measures) and others retained, and in several cases new studies have been added. And nine schemes have been added – see the next section.

## 1.4 The mainstream interventions included

The 23 mainstream schemes retained from the third edition are:

A.R.R.O.W. Academy of Reading® AcceleRead AcceleWrite Better Reading Partnership Catch Up Literacy Corrective Reading Cued Spelling ENABLE FFT Wave 3 Inference Training Lexia Paired Reading	Paired Writing Phono-Graphix™ Read Write Inc. (including Fresh Start) The Reading Intervention Programm Reading Recovery Reciprocal Teaching SIDNEY Sound Discovery® Sound Training for Reading® THRASS Toe by Toe®
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And the nine new schemes are:

Better Reading and Writing Partners Easyread Grammar for Writing Rapid Plus Reciprocal Reading	Sound Reading System The Complete Spelling Programme Thinking Reading Write Away Together
--	--

Between them, these 32 schemes have been the subject of the 74 or more studies analysed in the Appendix to Part 1. The numbering system, however, runs up to 41 – this is because the eight schemes which have both primary- and KS3-level data, and Reading Recovery, which has data on both reading and writing, get two entries each.

All the schemes that focus on reading and/or spelling at primary level are in part A of **chapter 3**; those that focus on reading and/or spelling at KS3 level are in part B; and the all too few schemes that focus on writing are in part C – two of these, Write Away Together and Grammar for Writing, are new. The mainstream schemes are all described in **chapter 3**, and a guide through them is provided in **chapter 2**.

The way in which the information on mainstream schemes summarised in Part 1 was analysed is described in the Appendix. In this edition I no longer report data from alternative treatment or no-intervention comparison groups which are not well matched to the experimental group. Such data took up a lot of space in previous editions, but could not validly be used to support statistically-tested comparisons with the experimental groups. The only purpose the no-intervention group data served was to show that normal classroom teaching on the whole does not enable struggling readers and writers to catch up, but I think that point is now well enough documented and accepted. Moreover, including data from unmatched comparison groups might allow some evaluators to think that such flabby designs are more valuable than one-group studies – which they aren't. So in this edition I have treated unmatched-groups studies as one-group studies, and have passed silently over the omission of their other data.

# Chapter Two

## Signposts

### 2.1 Finding your way

This chapter is intended to help you find the schemes which may be most relevant to your situation. All the mainstream schemes mentioned are described in [chapter 3](#) – but remember that these are only the schemes analysed for this report.

Before going on to the remainder of the chapter it would be advisable to read the caveat in the next section on the scale of the various evaluations.

### 2.2 Scale of the evaluations

When considering the interventions and what is said about them here, it would be well to bear in mind that the evaluations differed vastly in scale. To emphasise this, [Table 2.1](#) shows the numbers of children involved. Where more than one project is covered by a heading, the various studies' numbers are summed.

Some schemes have been evaluated on a large scale, while the numbers against some well-known names in the list are comparatively small. But there is no simple correlation between size and quality here – some small studies (in terms of number of children in the experimental group) were meticulously designed and reported, while the reporting of some with much larger numbers was considerably less complete.

The 'Other group(s)' column includes numbers of children in both alternative treatment and no-treatment control/matched comparison groups. The large number of gaps in this column emphasises how few studies adopt a better design than the one-group pre-test/post-test study. It should be an urgent task for the profession to remedy this.

What the 'Other group(s)' column does not include is children in unmatched groups which purport to provide comparisons with the experimental groups – in this edition I have decided to omit all this information, for the reasons given at the end of [chapter 1](#) and near the beginning of the [Appendix to Part 1](#). However, in previous editions, data from no-treatment groups did support the conclusion that ordinary classroom teaching mostly has no effect.

**Table 2.1: Numbers of children involved in the 32 schemes, in decreasing order of number in experimental group(s)**

Ref. No(s)	Name of scheme	Numbers of children		
		Experimental group(s)	Other group(s)	Total
6, 28	Catch Up Literacy	5748	96	5844
17	Reading Recovery	4102	339	4441
13	Paired Reading	2372	446	2818
16	The Reading Intervention Programme	1179	92	1271
4	Better Reading & Writing Partners	798		798
5, 27	Better Reading Partnership	750		750
25	THRASS	501		501
1	A.R.R.O.W.	446		446
11, 31	Inference Training	427	46	473
41	Grammar for Writing	378	366	744
40	Write Away Together	249		249
3	AcceleRead AcceleWrite	240		240
15, 33	Read Write Inc. & Fresh Start	237		237
23, 34	Sound Training for Reading®	224	21	245
12	Lexia	222		222
14	Phono-Graphix™	215		215
9, 30	ENABLE	165		165
21	Sound Discovery®	164		164
22	Sound Reading System	140		140
26	Toe by Toe®	116	12	128
29	Corrective Reading	92		92
19	Reciprocal Teaching	88		88
20	SIDNEY	66		66
8	Easyread	52	43	95
7	Cued Spelling	50		50
18	Reciprocal Reading	48		48
38	Paired Writing	45	45	90
35	Thinking Reading	44		44
24	The Complete Spelling Programme	43	38	81
2	Academy of Reading®	40		40
32	Rapid Plus	38		38

## 2.3 Overall conclusions

Very little of the new evidence in this fourth edition has led me to revise the conclusions reached in the third edition; nor has the dropping of some evidence from that edition. Most of the earlier conclusions are therefore re-stated here, with a few deletions and modifications.

- Ordinary teaching ('no treatment') does not enable children with literacy difficulties to catch up.  
*Implication: Although good classroom teaching is the bedrock of effective practice, most research suggests that children falling behind their peers need more help than the classroom normally provides. This help requires coordinated effort and training.*
- Schemes for KS3 are few, but several work well for reading, and Grammar for Writing has great potential.  
*Implication: Provided they receive continuing support, children who make these gains should be better able to cope with the secondary curriculum.*
- Schemes for children who struggle with spelling work best when highly structured.  
*Implication: Children with spelling problems need schemes tailored to their preferred ways of learning and delivered systematically 'little and often'. Such schemes work particularly well for enabling children to grasp relatively regular patterns of spelling.*
- Work on phonological skills for reading should be embedded within a broad approach.  
*Implication: Phonics teaching should normally be accompanied by graphic representation and reading for meaning so that irregular as well as regular patterns can be grasped. Children with severe difficulties in phonological skills, or using English as an additional language, may need more 'stand alone' phonics teaching to support their speaking and listening.*
- Children's comprehension skills can be improved if directly targeted.  
*Implication: Engaging the child in exploring meaning embeds the relevance of reading for life, expands vocabulary and broadens the range of texts. Children falling behind their peers need both carefully structured reading material and rich, exciting texts.*
- ICT approaches work best when they are precisely targeted.  
*Implication: The mediation of a skilled adult is essential to ensure technologically driven schemes meet children's needs. Time needs to be allocated effectively so that the diagnostic tools of programmes can be used for each child appropriately.*
- Large-scale schemes, though expensive, can give good value for money.  
*Implication: When establishing value for money, long-term impact and savings in future budgets for special needs must be considered, particularly when helping the lowest-attaining children.*
- Where reading partners are available and can be given appropriate training and support, partnership approaches can be very effective.  
*Implication: Reading partners need skilled training and support to maximise impact. A school needs to manage partners so that feedback to classroom teachers is effectively and regularly given. Teaching assistants (TAs) and learning support assistants (LSAs) are well equipped to undertake this role.*
- Good impact – sufficient to at least double the standard rate of progress – can be achieved, and it is reasonable to expect it.  
*Implication: If the scheme matches the child's needs, teachers and children should expect to achieve rapid improvement. High expectations are realistic expectations in most cases.*

# Chapter three

## The mainstream schemes and their evaluations

This chapter describes the 32 schemes, in three sections:

- A. Schemes targeting reading and/or spelling at primary level
- B. Schemes targeting reading and/or spelling at KS3
- C. The few schemes which have investigated how to improve writing (three for primary, one for KS3).

Within each section the schemes are dealt with in alphabetical order (except that Grammar for Writing, the only scheme for writing in KS3, is last in the writing section). Each description contains an outline of the scheme itself, followed by a few details of its evaluation and results, and references. Wherever possible, contact details are given. First, some general characteristics of the 32 schemes are summarised in **Tables 3.1** (primary), **3.2** (KS3) and **3.3** (writing) on the next two pages.

**Table 3.1: General characteristics of the primary schemes for reading and/or spelling**

Ref no.	Scheme	Y1	Y2	Y3	Y4	Y5	Y6	Duration (weeks)	Number of sessions for each child in experimental group	Taught by
1	A.R.R.O.W.	✓	✓	✓	✓	✓	✓	1½	60 mins/day	computer & supervising adult, 1-1
2	Academy of Reading			✓	✓	✓	✓	20	variable	computer & supervising adult, 1-1
3	AcceleRead AcceleWrite		✓	✓	✓	✓	✓	4, 8	20 mins/day	computer & supervising adult, 1-1
4	Better Reading and Writing Partners	✓	✓	✓	✓	✓	✓	14–15	3 x 20 mins/week	TA, 1-1
5	Better Reading Partnership	✓	✓	✓	✓	✓	✓	10–17	2 or 3 x 15 mins/week	other adults, 1-1
6	Catch Up Literacy		✓	✓	✓	✓	✓	12–44	2 x 15 mins/week	teacher/TA, 1-1
7	Cued Spelling		✓	✓	✓	✓	✓	6–8	3 x 15 mins/week	parents, other pupils, 1-1
8	Easyread			✓	✓			8–16	up to 90 x 5–15 mins/day	computer & supervising adult, 1-1
9	ENABLE	1-1	✓					8	5 x 30 mins/week	TA/LSA/other adults, 1-1
		Plus		✓	✓	✓		22	2 x 30 mins group + 1 x 10 mins indiv./week	TA/LSA, group & 1-1
10	FFT Wave 3	✓	✓	✓	✓	✓		10	1520 mins/day	TA, 1-1
11	Inference Training		✓	✓	✓	✓	✓	3, 4, 6	2 x 2045 mins/ week	other adults, group
12	Lexia	✓	✓	✓	✓	✓	✓	10	2 or 3 x 20 mins/week	computer & supervising adult, 1-1
13	Paired Reading	✓	✓	✓	✓	✓	✓	9	variable	other adults/pupils, 1-1
14	Phono-Graphix®	✓	✓	✓	✓	✓	✓	12-26	12 x 1 hour sessions 3 x 20 minute follow-up for each 1-hour session	teachers & other adults, 1-1
15	Read Write Inc.		✓	✓	✓	✓	✓	8, 12, 20	60 mins/day	TA, group
16	The Reading Intervention Programme	✓	✓	✓	✓	✓	✓	12, 25	2 x 30 mins/week	teacher/TA, group and 1-1
17	Reading Recovery	✓	✓					12-20	30 mins/day	teachers, 1-1
18	Reciprocal Reading					✓	✓	10	2 sessions/week	teachers, group
19	Reciprocal Teaching			✓	✓	✓	✓	16-52	20 sessions	teachers, group
20	SIDNEY	✓	✓					12	15 mins/day	LSA, 1-1
21	Sound Discovery		✓	✓	✓	✓	✓	10-22	3 sessions/week, variable length	teachers, group
22	Sound Reading System		✓	✓	✓	✓	✓	18 (ave.)	1 hr + 3 x 20 mins/week	teacher/LSA/TA/ SENCo, 1-1
23	Sound Training for Reading			✓	✓	✓	✓	8	1 x 45 mins/week	teacher, group
24	The Complete Spelling Programme	✓	✓	✓				120	20 mins/day	teacher, whole class
25	THRASS		✓	✓	✓	✓	✓	26, 13	30 mins/day	teacher, group
26	Toe by Toe	✓	✓	✓	✓	✓	✓	74	60 mins/day	volunteers, 1-1

**Table 3.2: General characteristics of the KS3 schemes for reading and/or spelling**

Ref no.	Scheme	Y7	Y8	Y9	Duration (weeks)	Number of sessions for each child in experimental group	Taught by	
27	Better Reading Partnership	✓	✓		11	2 or 3 x 15 mins/week	other adults, 1-1	
28	Catch Up Literacy	✓	✓	✓	34, 17	2 x 15 mins/week	teacher or TA, 1-1	
29	Corrective Reading	✓			17	3 x 30 mins/week	teacher/TA, group	
30	ENABLE PLUS (KS3)	✓	✓	✓	10-14	2 x 30 mins group + 1 x 10 mins indiv./week	TA/LSA, group & 1-1	
31	Inference Training	✓	✓	✓	15	2 x 20–45 mins/week	other adults, group	
32	Rapid Plus	✓	✓	✓	13	as needed	computer & supervising adult, 1-1	
33	Read Write Inc. Fresh Start	(1)	✓	✓	✓	24	60 mins/day	TA, group
		(2)	✓			34		
		(3)	✓			6		
34	Sound Training for Reading			✓	6	1 x 60 mins/week	teacher, group	
35	Thinking Reading	✓	✓	✓	34 (ave.)	3 x 30 mins/week	teacher, 1-1	
36	THRASS	✓	✓		13, 8	30 mins/day	teacher, group	
37	Toe by Toe		✓	✓	13	60 mins/day	other adults, 1-1	

**Table 3.3: General characteristics of the schemes for writing**

Ref no.	Scheme	Y1	Y2	Y3	Y4	Y5	Y6	Y8	Duration (weeks)	Number of sessions for each child in experimental group	Taught by
38	Paired Writing				✓		✓		8, 6	variable	other pupils, 1-1
39	Reading Recovery	✓	✓						12-20	30 mins/day	teacher, 1-1
40	Write Away Together		✓	✓	✓	✓	✓		12 (ave.)	2 x 20 mins/week	trained adult, 1-1
41	Grammar for Writing							✓	3 x 3	4 x 40 mins/week	teacher, whole class

# A. Reading and spelling schemes – primary level

## 3.1 A.R.R.O.W. (Aural – Read – Respond – Oral – Write)

### Scheme

Colin Lane has for many years been refining his theory that hearing one's own voice is a psychological key to much language comprehension and performance, that the cause of some children's difficulty in learning to read and spell is having an indistinct or unattended 'self voice', and that being able to record and play back their own voices can help some children make good progress. His system nowadays uses laptop computers with headphones to provide examples and exercises, and monitor children's progress through his many-layered program. Children work individually with a laptop. The program displays a piece of text at an appropriate level, anywhere from a single letter to a short paragraph. The child hears it spoken, then repeats it aloud and records it, then plays it back – repeating this process as often as wished until the result is satisfactory to the child. Each mini-exercise ends with the requirement that the child writes down the piece of text. Nominally, each child should receive the program for one hour a day for ten consecutive school days. One teacher or TA can supervise as many children as the school has laptops for. The scheme is particularly appropriate for children with reading or spelling problems, but has also been used as an across-the-board Wave 1 programme. Mary Nugent (personal communication, 2012) in Ireland reports it has been used successfully there with Traveller children, and it has also been used with success in Trinidad.

### Evaluation

In 2010 Colin Lane published a book setting out his theories and providing copious data on its use in various settings. From the information given I have selected an independent study carried out by Andrew Richards of Exeter University with a sample of 85 Y6 children in one primary school in Bristol, and Colin Lane's own largest dataset, of 361 children across England and Wales who received the program in 2007–10 (for the latter Colin supplied some unpublished details). The Bristol study showed remarkable benefit for spelling, and spectacular progress in both reading accuracy and comprehension. The large dataset showed remarkable progress in reading accuracy and spelling.

### Reference

Lane (2010), unpublished details supplied by Colin Lane

### Contact

Dr Colin Lane  
T: 01278 450932  
[drcolinlane@yahoo.co.uk](mailto:drcolinlane@yahoo.co.uk)

## 3.2 Academy of Reading®

### Scheme

The AutoSkill Academy of Reading® is a computer-based reading intervention programme that is designed to give pupils the basic reading skills they need to form a foundation of reading success.

The programme was developed by Canadian neuropsychologists who were interested in how ICT can help pupils with dyslexia achieve better reading fluency. The programme has since evolved to become a tool to help teachers improve reading fluency for pupils in the mainstream classrooms of primary schools, in secondary schools for pupils who are reading-delayed or have special educational needs, or for supporting pupils learning English as an additional language.

The programme activities include:

- pupil training in phonemic awareness
- pupil training in sound-symbol association
- pupil training in phonics and decoding, including:
  - visual-visual matching exercises
  - auditory-visual matching exercises
  - oral reading practice (optional)
- pupil training and assessment in comprehension, including:
  - silent reading comprehension
  - oral reading comprehension (optional)
- pupil reading practice
- additional assessment capabilities for benchmarking pupils' reading levels.

Teachers are able to draw from these elements in either a system-prescribed approach that develops an Individual Education Plan for each student based on their performance on an assessment, or through any customised selection of activities to complement their classroom requirements.

### Evaluation

One useful set of UK data was found, from a pilot study in five Education and Library Board areas in Northern Ireland carried out in 2003–04. The data were gathered by teachers in the schools and analysed by researchers at AutoSkill in Ottawa. A useful gain was found for comprehension in Northern Ireland Y7 (= England and Wales Y6).

### Reference

Loh and Stanton (2004)

### Contact

<http://eps.schoolspecialty.com/products/details.cfm?series=acadread>

### 3.3 AcceleRead AcceleWrite

#### Scheme

Martin Miles in Devon and Vivienne Clifford in Harrow developed a scheme they called 'The Talking Computer Project' in 1992, trialled it in Somerset, and named the published version AcceleRead AcceleWrite. The original target group was children with dyslexic-type difficulties, but the programme is now used with children with other forms of literacy difficulty, and Mary Nugent in Ireland reports it has been used successfully there with Traveller children. Most of the data analysed in this report come from KS2, but it has been used in all school years from Y1 to Y11. Three sets of evaluation data are summarised.

In 1993, the education authority in Jersey read about the success of 'The Talking Computer Project', and realised that it would be possible to replicate the study at little cost. Jersey schools already had the appropriate computers and a good relationship with the software publisher. The level of computer literacy among Jersey teachers meant that the training to use the computer element of the programme was readily achievable. The programme has since been used by many other authorities.

A total of 71 pupils with reading difficulties from 15 primary schools and four secondary schools took part (but because separate data were not given for the various year groups, this scheme has been listed only under primary). Each school supplied a project coordinator. Courses were run to train the learning assistants involved in how to use the computer software and the process of delivering the reading material.

The learning assistants worked with individual children for 20 minutes a day over a four-week period. The child was presented with a card containing four sentences. Each card contained a particular phonic pattern or number of patterns. The child was allowed to read the card until confident of memorising it. The card was then placed face down and the pupil had to say the sentence to the adult, then type it into the computer. The computer said each word as it was entered, giving audio feedback on misspelt words. It also read the complete sentence once the full stop had been typed. Mistakes were rectified by the child until the sentence was completed correctly.

#### Evaluations

##### (1) Jersey

The Jersey evaluation was carried out by Mel Goodyear, Jersey Advisory Service, who coordinated the project, assisted by Martin Miles. Results were available from 61 children, who made a useful gain in reading accuracy.

#### References

Clifford and Miles (1993, 1994), Jersey Advisory Service (1993), Miles (1994)

##### (2) Devon

Later, Martin Miles used the programme in a primary school in Devon with 30 mostly older KS2 children. Remarkable gains were made in reading accuracy and spelling.

#### Reference

Unpublished data supplied by Martin Miles

##### (3) Wiltshire

The programme has also been used in various primary schools in Wiltshire with 149 children with literacy difficulties. Remarkable gains were made in reading comprehension and spelling.

#### Reference

Unpublished data supplied by Sarah Couzens via Martin Miles

## **Contacts**

Dr Martin Miles or Talking Systems

[\*\*mmilesep@aol.com\*\*](mailto:mmilesep@aol.com)

22 Heavitree Road

Exeter EX1 2LQ

T: 01392 211184

[\*\*talksystem@aol.com\*\*](mailto:talksystem@aol.com)

and

[\*\*dyslexic.com\*\*](http://www.dyslexic.com) (publisher of Accelerread Accelewrite) at  
iansyst Ltd

Fen House

Fen Road

Cambridge CB4 1UN

T: 01223 420101

[\*\*swsales@dyslexic.com\*\*](mailto:swsales@dyslexic.com)

[\*\*http://www.dyslexic.com/acceleread\*\*](http://www.dyslexic.com/acceleread)

## 3.4 Better Reading and Writing Partners

### Scheme

This intervention, developed in Leicester, is for pupils in Y1–7 who have made a start on reading and writing but are experiencing difficulties. It was adapted from approaches used by Reading Recovery and Better Reading Partnership and was implemented predominantly, but not exclusively, in schools taking part in the Every Child a Reader initiative. In 2006–11 it was used with more than 1,200 children in Leicester.

It is a one to one, 20 minutes a day intervention built around the needs of the pupil and promotes

- phonics and phonological awareness
- language skills and comprehension
- effective reading behaviours when reading texts
- writing skills
- enjoyment of reading.

It is usually delivered by a trained TA. Assistants initially attend three days of training, and then receive on-going, top-up training both in school and at a local authority (LA) centre. Although each lesson lasts 20 minutes, TAs have ten minutes after each lesson to reflect and plan the next day's lesson. Emphasis is placed on involving parents in their child's reading, and there is a range of resources to promote home reading.

### Evaluation

Data were available on 798 children who had received the intervention in 2009–11. The results showed a remarkable impact on reading accuracy.

### Reference

Unpublished data supplied by Tony Whatmuff

### Contact

[Tony.Whatmuff@leicester.gov.uk](mailto:Tony.Whatmuff@leicester.gov.uk)

## 3.5 Better Reading Partnership

### Scheme

The Better Reading Partnership (BRP) was developed originally in Bradford in the mid-1990s out of the realisation that those experiencing difficulties in reading were not finding current strategies of simplifying text very helpful. Such approaches were found to result in poor-quality learning and a heavy dependence on the teacher.

BRP is a targeted, time-limited, one-to-one, Wave 2 intervention using a structured lesson format but not scripted. It is designed to improve the use of reading strategies for pupils and develop understanding, enabling pupils to become successful, independent readers who read with enjoyment. Each pupil selected for the programme (Y1–9) works with a trained adult for 15 minutes three times a week for ten weeks. Lessons include re-reading, assessment (through observation and running records), and introduction and first reading of a new text. Partners are encouraged to select and use a wide range of text genres and reflect on and plan for pupil progress following each lesson.

### (1) Durham

In Durham the BRP aimed to improve the skills of average and below-average readers, enabling them to become more successful in their independent reading. Adults working on the programme received two days' training and two follow-up interviews with the literacy consultant in charge of the programme to discuss their sessions and their tutees' progress. Adult partners could be teachers, learning support staff, TAs, ancillary staff such as caretakers and cooks, parents, grandparents, community workers, governors and friends of the school. The partners worked with the pupils for ten weeks. They read together for 15 minutes, three times a week. Pupils' reading included a variety of fiction, non-fiction and poetry texts, and was drawn from reading schemes as well as 'off-scheme' books and magazines and newspapers for older pupils.

### Evaluation

The LA collected its own monitoring data. In Y1–2 the children reached reading ages (accuracy and comprehension) above chronological age (c.a.), and sustained their gains over the next year. The Y3–5 pupils made useful gains in comprehension during the intervention and just about standard progress in the following 12 months.

### Reference

Unpublished data supplied by Ann Foster

### (2) Nottinghamshire

The Read On – Write Away! initiative in Derbyshire took up BRP as one of its schemes in 1998, and later implemented it also in Nottinghamshire,

### Evaluation

Data were received on BRP in Nottinghamshire in 2004–06. There were remarkable gains in comprehension across Y2–6.

### Reference

Unpublished data supplied by Karen Hanson

### (3) Thameside

BRP is still widely used, and now has a national trainer.

## **Evaluation**

BRP continues to produce remarkable results across the primary age range, as shown by recent data from Tameside.

## **Reference**

Unpublished data supplied by Gill Cartwright

## **Contact**

Gill Cartwright

Literacy Consultant & National Trainer for Better Reading Partnership

Education Works Ltd

T: 07538 532484

[gill.cartwright@educationworks.org.uk](mailto:gill.cartwright@educationworks.org.uk)

[www.educationworks.org.uk](http://www.educationworks.org.uk)

<http://www.educationworks.org.uk/who-we-are/gill-cartwright.html>

## 3.6 Catch Up Literacy

### Scheme

Catch Up Literacy is a one-to-one literacy intervention for struggling readers aged 6–14. It is centred on a 15-minute structured teaching session delivered twice a week by a teacher or TA and tailored to the needs of individual children. According to Holmes *et al.* (2011), it has been used to support about 210,000 children in 4,250 schools in 86 LA areas across England and Wales. Test results have shown that it has made a significant difference in literacy skills for the majority of primary pupils who have received it. A key factor in its success appears to be that it is practical and inexpensive to implement in a variety of school contexts.

Catch Up Literacy was initially developed in 1998 at Oxford Brookes University, in partnership with the Caxton Trust, as a result of a study undertaken by the project consultants, Diana Bentley and Dee Reid. A pilot evaluation was then carried out, together with Suzi Clipson-Boyles. The research helped to identify a systematic method for supporting individual struggling readers in Y3. Further research and extensive trialling have extended the scheme to support struggling readers in Y2, Y4–6, at primary/secondary transition (see [chapter 5](#)), KS3 (see [section 3.28](#)), and a range of other settings, such as Gypsy Roma Travellers (see [chapter 6](#)) and Looked-After Children. A Welsh-medium version, called Llythrennedd Dyfal Donc, has also been developed (see Brooks, 2009: 11 & 32–33).

Catch Up Literacy begins with a comprehensive assessment procedure which provides pre-intervention data and from which the adult tutor determines the child's Catch Up Literacy level and targets. The Catch Up Literacy level is used to identify a book appropriate for the individual child which s/he will be able to read with 90% success (instructional level).

The individual sessions have three parts:

- During the *prepared reading*, the adult talks through the text and pictures of the selected book, providing key vocabulary and familiarising the child with the story.
- The child then reads the story whilst the adult records progress and identifies words to follow up.
- This is followed by a *linked writing* or spelling activity based on the child's miscues earlier in the session. The adult helps the child with the reading and spelling of the words using a variety of methods, including phonics and the visual recognition of irregular words.

Catch Up has produced a range of support materials, including three interactive Digital Game Collections, and Parent Links leaflets and video. All adult tutors receive training (Open College Network accredited), and additional support is provided for them via the Catch Up Community.

### Evaluations

The full programme of Catch Up Literacy is intended to last a whole school year. However, the initial evaluation was a one-term pilot study carried out by the programme developers in the autumn term of 1997 (Clipson-Boyles, 2000). It showed that the experimental group made substantial progress in reading accuracy, an alternative treatment group made just over standard progress, and the comparison group fell even further behind. The data on this study, even though small, have been retained in this edition because it is to date the only comparative study on Catch Up Literacy at primary level that shows a strong effect.

Otherwise, even though large amounts of data were available for the third edition and samples of those data were included then, they have been replaced in this edition by national data on 5,479 children covering the period 2002–10 contained in Holmes *et al.* (2011). That dataset contains an undisclosed number of children in KS3, but is presented in the primary section of the Appendix to Part 1. The results show useful progress.

There are also two separate datasets for KS3 – see [section 3.28](#).

## References

Clipson-Boyles (2000), Reid *et al.* (2004), Holmes *et al.* (2011, 2012)

## Contact

Julie Lawes, Director  
Catch Up  
Keystone Innovation Centre  
Croxtan Road  
Thetford IP24 1JD  
T: 01842 752297  
F: 01842 824490  
[www.catchup.org](http://www.catchup.org)

## 3.7 Cued Spelling

### Scheme

Cued Spelling is a procedure designed by Keith Topping and colleagues at the University of Dundee for two people working together. The pair might be parent and child working at home, or two children working together in school. In school, the children can be of the same or different age and spelling competence. They may remain in role as tutor and tutee, or the roles may reverse at intervals. Cued Spelling can also be used for whole-class tutoring.

According to the authors, the technique consists of ten steps, four points to remember, and 2 reviews – a chart setting all this out can be downloaded from the website. The most accessible description of the method is in Topping (2001). He admits (p.181) that it looks ‘rather complicated’ but maintains that ‘You can train seven-year-olds to do it in half an hour – it is a lot simpler than it looks.’ It is usually done three times a week for an initial trial period of six weeks. Each session takes about 15 minutes.

### Evaluations

Topping (2001: 196–202) summarised several studies on this technique, but none are large enough for this edition. Instead, some data from Bristol have been used: there were substantial gains in comprehension and spelling, and a useful one in reading accuracy.

### References

Topping (1995, 2001), and unpublished data supplied by Sue Derrington

### Contact

<http://www.dundee.ac.uk/eswce/research/projects/readon/resourcesforteachers/>

## 3.8 Easyread

### Scheme

The Easyread system for helping children learn to read and spell has been developed over the past decade by Oxford Learning Solutions, using feedback from children, parents and teachers, as well as being informed by research and theory. It is an online tutorial system which implements synthetic phonics through Guided Phonetic Reading.

The root difficulty in all phonics teaching is the inconsistency of the English spelling system. There are multiple potential graphemes for most phonemes and multiple phonemes for many graphemes. Therefore, the teaching of phonics through rules can be very challenging for some children, since almost every rule has so many exceptions. By contrast, Guided Phonetic Reading develops the child's phonetic decoding ability through active decoding practice and repeated exposure to the different grapheme-phoneme relationships. No rules are taught. The child is presented with familiar visual images above the line of text to represent the phonemes in each word. This helps with the decoding of each grapheme and removes the fear of the text. So the ability to decode is taught as a skill, through practice. The text presented in this way is called Trainertext. After around 90 daily sessions of 5–15 minutes with Trainertext the child begins to transfer the decoding ability to conventional text.

All the training needed by the adults supervising Easyread lessons is provided by Oxford Learning Solutions, with online tutorials, manuals and direct support, using a messaging facility within the system and a helpline. The Easyread system also allows children to do lessons at home, at weekends and during school holidays, if internet access and some parental support are available.

### Evaluation

In school year 2011–12 an independent research team from the Open University, consisting of Professor David Messer and Dr Gilly Nash, conducted a randomised control trial in a number of schools in London to evaluate the effectiveness of Easyread for children identified by schools as in need of literacy support (school action, school action plus or a statement of special educational need). The nominated children were randomly allocated to an experimental group who had Easyread tutorials or a 'waiting list' control group who continued to receive the type of additional support normally provided by the school, and would receive the intervention in school year 2012–13. Pre- and post-test data were available for 52 children in the experimental group, and 43 in the control group. The effect size showed distinctly better progress in reading accuracy for the experimental group.

### Reference

Unpublished data supplied by David Messer and Gilly Nash

### Contact

David Morgan  
Oxford Learning Solutions  
29 Beaumont St  
Oxford OX1 2NP  
T: 0845 458 2642  
F: 0845 458 2643

[david@easyreadsystem.com](mailto:david@easyreadsystem.com)  
[www.EasyreadSystem.com](http://www.EasyreadSystem.com)

### 3.9 ENABLE (Enhancing Attainment in Basic Literacy)

[Not to be confused with the scheme of the same name featured in [chapter 5](#)]

#### Scheme

This suite of literacy intervention programmes was developed by the Inclusion Support team in Sandwell Local Authority. The first version was ENABLE-Plus, for pupils in Y3–5; then came ENABLE – One to One, for Y2; and last ENABLE-PLUS (KS3), for Y7–9. The Y2 version is delivered, as its name says, one-to-one. Each child receives a daily 30-minute session for eight weeks. In the other versions groups of three children receive 30 minutes' group teaching twice a week, and each child also receives 10 minutes' individual teaching once a week. ENABLE-Plus runs for 22 weeks, ENABLE-PLUS (KS3) for 10–14 weeks. ENABLE-Plus and ENABLE-PLUS (KS3) are only suitable for delivery by employed school staff (e.g. TAs, LSAs), whereas ENABLE – One to One can also be delivered by volunteer helpers. Otherwise, the details are the same for all three versions.

Each school that wishes to run a programme nominates a school coordinator. School coordinators attend training provided by Inclusion Support (IS) to prepare for setting up projects in their own schools. They then recruit tutors, identify pupils needing support, arrange for IS staff to provide training for the tutors, provide ongoing support to the tutors, and evaluate pupils' progress.

Briefly, the teaching consists of: direct instruction of high-frequency words or phonic skills; prepared reading of novel text; repeated practice using familiar text; using skills via guided and shared reading; employing a variety of texts to apply skills. Promoting self-esteem is also a core aspect of the ENABLE suite of programmes (cf. the Somerset projects in previous editions), and forms an integral part of the training. The pace of instruction is influenced by the pupils' rate of progress, thereby ensuring that all skills are learnt to mastery level.

#### Evaluations

Both primary-level evaluations analysed in the Appendix to Part 1 were carried out by the authors of the scheme. One showed substantial gains in comprehension and spelling for Y2 pupils, the other a useful gain in reading accuracy for those in Y3–5.

#### References

Bowen (2003), Bowen and Yeomans (2002) and unpublished data supplied by Phil Bowen

#### Contact

Jan Shearer/Moira Tallents  
Sandwell Inclusion Support, Connor Education Centre  
Connor Road  
West Bromwich  
West Midlands B71 3DJ  
T: 0845 3527552  
[Jan Shearer@sandwell.gov.uk](mailto:Jan.Shearer@sandwell.gov.uk)

## 3.10 FFT Wave 3

### Scheme

This description is taken from Canning (2004):

‘The programme is aimed at children in Year 1 and above who are working within or below Book Band 2. Designed to be delivered by experienced TAs, it consists of a rolling programme of a reading day, writing day, reading day, writing day, etc., taking place for 15–20 minutes daily on a one-to-one basis.’

### Reading Day

The child:

1. rereads a familiar book (4/5 mins);
2. carries out three fast letter-work activities (3 mins);
3. reads a new book following a book introduction (8 mins);
4. reconstructs a cut-up sentence from the book (2 mins);
5. learns a new word from the book (2 mins).

### Writing Day

The child:

1. rereads yesterday’s new book – the adult takes a running record once a week (5 mins);
2. revises word(s) previously learned (2 mins);
3. composes and writes a sentence based on a picture or stimulus from the book just read (7/8 mins);
4. reconstructs a cut-up sentence taken from the written sentence (2 mins);
5. learns a spelling from the writing just completed (2 mins).

### Evaluations

A pilot programme was evaluated in 2004. There was a useful gain in reading accuracy. A larger study in 2008 produced a remarkable gain for accuracy.

### References

Canning (2004, 2009)

### Contact

Andy Taylor  
Training and Development Manager  
Fischer Education Project Ltd.  
Cargo Fleet Offices  
Middlesbrough Rd  
Middlesbrough TS6 6XH  
T: 0770 2781745  
[andrewtaylor35@btinternet.com](mailto:andrewtaylor35@btinternet.com)  
[www.fischertrust.org](http://www.fischertrust.org)  
[literacy@fischertrust.org](mailto:literacy@fischertrust.org)  
[www.literacy.fischertrust.org](http://www.literacy.fischertrust.org)

## 3.11 Inference Training

### Scheme

This scheme focuses upon the band of children who fall within the normal range of cognitive ability, yet fail to comprehend fully what they read. The many skills needed to understand a text are broken down into manageable chunks: lexical elaboration, question generation and comprehension monitoring. Tasks are designed so that children can make links between the text and its meaning. Sessions last between 20 and 45 minutes, twice a week for four weeks. Very useful analyses of the literature on teaching inference are Kispal (2008) and Clarke (2010).

Studies by Nicola Yuill and Jane Oakhill at the University of Sussex in the 1980s showed that less skilled readers have difficulty in making inferences from text. They argued that word recognition and decoding skills are not always adequate in developing good reading skills. The meanings of individual sentences and paragraphs have to be integrated so as to understand the main ideas of the text. It has been suggested that working memory plays a part in this skill.

Yuill and Oakhill (1988) tested the effect of children's reading comprehension using three types of intervention:

1. inference skills training (this consisted of lexical inference, question generation and prediction)
2. comprehension exercises
3. rapid decoding practice.

The same narrative texts were used in all three intervention conditions. The experimenter saw children in groups of three to five, twice a week over three-and-a-half weeks. Length of sessions varied from 20 to 45 minutes. Training sessions lasted slightly longer than control sessions, since subjects had to spend time thinking of questions, whereas the control group had precise tasks to perform that did not involve long periods of silence.

Later studies have highlighted the key role inference plays in reading comprehension. Cain *et al.* (2001) showed that less skilled comprehenders generate fewer inferences than skilled comprehenders. A longitudinal study of children between the ages of 7 and 11 by Oakhill and Cain (2011) found that the skills that predicted later reading comprehension were those that aided the construction and integrated representation of the meaning of text. Three skills – inference and integration, comprehension monitoring and the knowledge and use of story structure – predicted reading development, over and above general verbal ability and vocabulary.

### Evaluations

Yuill and Oakhill's was a quasi-experimental study, rather than an evaluation of a separately devised project. The results showed that less skilled comprehenders benefited from Inference Training more than skilled comprehenders. The authors concluded that, for less skilled comprehenders, Inference Training was both more beneficial and more helpful than decoding practice. However, comprehension exercises appeared to be as beneficial as Inference Training. This study is of particular interest because so few have tackled comprehension improvement directly.

McGee and Johnson (2003) conducted a small randomised controlled trial (RCT) (40 children in four groups) in one school in Glasgow replicating Yuill and Oakhill's comparison between inference training and comprehension exercises (but not rapid decoding). All four groups (skilled/ less skilled x inference training/ comprehension exercises) made remarkable progress in the three weeks of the interventions, but the less skilled comprehenders who received inference training made the most progress, and reached an age-appropriate level – a different result from Yuill and Oakhill's.

Some much more recent (2005–06 and 2009–11) data were obtained from Leicester, where Tony Whatmuff developed an intervention using Inference Training which was first evaluated by a group led by Joanna Lockley, and then routinely monitored. The 2005–06 group (N=57) showed remarkable gains in both accuracy and comprehension, and the 2009–11 results (N=204) showed a remarkable gain in comprehension. In 2009–11 data were also gathered on pupils in KS3 – see [section 3.31](#).

## References

Cain *et al.* (2001), McGee and Johnson (2003), Oakhill and Cain (2011), Yuill and Oakhill (1988), unpublished data supplied by Joanna Lockley and Tony Whatmuff

## Contact

Tony Whatmuff  
Special Needs Teaching Service  
Leicester Local Authority  
T: 0116 2254800  
[Tony.Whatmuff@leicester.gov.uk](mailto:Tony.Whatmuff@leicester.gov.uk)

## 3.12 Lexia

### Scheme

Lexia is an Independent Learning System developed in the USA for children with dyslexia, and now in use in several areas in Britain as a Wave 3 intervention. Originally computer-installed, from 2010 it has been web-based and can be accessed by pupils from home as well as school. This change has enabled the system to keep track of users in real time and provide tailored resources on demand. Lexia is predominantly phonics-based, beginning at initial letter level, and includes a simple comprehension element. Pupils work through the system independently and at their own pace. Teachers need to give initial guidance on using it, teach and reinforce some units, and mainly oversee and monitor how their pupils are getting on.

### Evaluations

LexiaUK sent various datasets in 2007 and again in 2012. Three studies (Norfolk, York, Cumbria) were based on the computer-installed system. Norfolk and York showed useful gains in comprehension, Cumbria in reading accuracy, and York and Cumbria in spelling. A project in Darlington using the web-based system showed a useful gain in reading.

### References

Wilson and Clarke (2005), Worsley (2003), Walker (2009, 2010)

### Contact

<http://www.lexiauk.co.uk/>

T: 0191 482 1939

### 3.13 Paired Reading

This is one of the simplest schemes yet devised, and the subject of one of the largest evaluations.

#### Scheme

Paired Reading was devised by Morgan (1976) to meet the needs of children who were finding reading difficult, and to involve non-professionals in helping them. He designed it to be simple to administer after the minimum of training, and flexible, in that it could be applied to any form of reading material. The fullest description is in Morgan's (1986) book, and it is summarised in diagrammatic form in Topping (2001) and on the website. Essentially, it is a 'scaffolding' approach in which tutor and child begin by reading aloud together, and the tutor gradually withdraws and leaves the child to read aloud alone. Techniques are specified for intervening when the child falters or makes an error, and praise is given regularly.

#### Evaluations

Topping and Lindsay (1992) reviewed dozens of studies from across the English-speaking world, and Topping (1990) himself carried out the largest evaluation, which was based in Kirklees. That evaluation covered not just one project in that LA, but 155 projects spread across 71 schools, both primary and secondary. The results consistently showed that the technique was effective, and other partnership approaches have imitated, incorporated or adapted it. Some socio-emotional outcomes are presented in Miller *et al.* (2010) and summarised in Topping *et al.* (2011) and at

<http://www.dundee.ac.uk/eswce/research/projects/readon/evaluation/>

Topping's work has led on to other forms of Paired Learning: Cued Spelling and Paired Writing (which have entries in this report, sections 3.7 and 3.38) and Paired Thinking (which does not). Mary Nugent in Ireland reports that Paired Reading has been used successfully there with Traveller children.

#### References

Miller *et al.* (2010), Morgan (1976, 1986), Topping (1990, 1995, 2001), Topping and Lindsay (1992), Topping *et al.* (2011). Also, for an evaluation in Dublin with children with moderate learning difficulties, Nugent (2001)

#### Contact

Prof. Keith Topping  
Centre for Paired Learning and Graduate Educational Psychology  
Department of Psychology  
University of Dundee  
Dundee DD1 4HN  
T: 01382 344628

<http://www.dundee.ac.uk/eswce/research/projects/readon/resourcesforteachers/>

### 3.14 Phono-Graphix®

'Letters are pictures of sounds.' Phono-Graphix® is based on this beguilingly simple insight.

#### Scheme

Diane McGuinness (1997, 1998) surveyed what she thought was wrong with initial reading instruction, and concluded that the main fault was not taking seriously the core design feature of English orthography – that it is an alphabet, a system for representing (originally and in principle) each distinctive speech sound with one symbol. She began developing a teaching system, and this was fully developed by her daughter-in-law and son, Carmen and Geoffrey McGuinness (1998), into the system known as Reading Reflex or Phono-Graphix®. The scheme arrived in the UK in a blaze of publicity in 1998. Its essential features are that it:

- develops the concept that written English is a phonemic code – each sound in a spoken word is represented by some part of the written counterpart;
- teaches the phonological skills of blending, segmenting and phoneme manipulation that are needed to use a phonemic code;
- teaches knowledge of sound-to-symbol relationships ('correspondences') explicitly.

The scheme is supported by detailed training and materials, and by a network and website. For a longer description see Dias and Juniper (2002).

#### Evaluations

Phono-Graphix® has been taken up quite widely in the UK, and substantial data were received from Bristol LA. The results showed useful progress for Y1 pupils in reading accuracy, remarkable progress in both accuracy and comprehension for those in Y2–6, and substantial progress in spelling for the latter group. See also [chapter 4](#).

#### References

Derrington (2001a, b), Dias and Juniper (2002), C. McGuinness and G. McGuinness (1998), D. McGuinness (1997, 1998), and unpublished data supplied by Sue Derrington

#### Contact

<http://www.readamerica.net>

## 3.15 Read Write Inc.

### Scheme

Read Write Inc. is Ruth Miskin's KS1 and lower KS2 (Y1–4) phonics programme. It is mostly used as a Wave 1 programme, but in some places is in use as Wave 2 or 3, up to Y6.

When in use as Wave 2 or 3, this scheme is designed for pupils who experience considerable difficulty in reading because they read slowly, hesitantly and/or with a great deal of inaccuracy. It is a synthetic phonics-based reading, writing and spelling programme which starts with the 44 phonemes of (most accents of) English and predominant graphemes for them, because the author maintains that difficulty in reading graphemes means difficulty in reading words, which will mean an inability to read text, which will inhibit comprehension. The scheme is structured, intensive and systematic, and relies on tailored, phonically regular yet age-appropriate texts, and on special training for teachers or instructors. Activities associated with each text help the pupils discover and practise techniques for investigating text and producing texts of their own. Emphasis is placed on cooperative learning in pairs.

### READING

The children:

- learn 44 phonemes and the corresponding letters/letter groups using simple picture prompts
- learn to read words using sound blending
- read stories featuring words they have learned to sound out
- show that they comprehend the stories through oral and written comprehension exercises.

### WRITING

The children:

- learn to write letters/letter groups which represent the 44 phonemes
- learn to write words by saying the sounds and graphemes
- write simple sentences
- compose stories based on picture strips
- compose a range of texts using discussion prompts.

### IMPLEMENTATION

The programme is organised by an in-school manager. All staff (teachers and TAs) are trained together by a Read Write Inc. trainer who has taught and managed the programme (no cascade training is used). The children read and write for an hour each day, grouped according to their reading level. Children work with a partner to practise what they have been taught. This means that all children participate during the whole lesson; there is no 'down time'.

### Evaluations

Evaluation data for Read Write Inc. were hard to come by. The information analysed here arose from the use of the scheme as a Wave 3 intervention in Bristol and Haringey. In Bristol there was a useful gain for reading (accuracy and comprehension). In Haringey there was a substantial gain in reading accuracy.

Ruth Miskin has also devised Read Write Inc. Fresh Start, for Y5–9. KS3 data on this are considered in [section 3.33](#).

### **Reference**

Unpublished data supplied by Sue Derrington, and by Christa Rippon via Jean Gross

### **Contact**

Julia Hart

T: 01943 605200

<http://www.ruthmiskinliteracy.com/contact.aspx>

[www.readwriteinc.com](http://www.readwriteinc.com)

## 3.16 The Reading Intervention Programme

### Scheme

The Reading Intervention Programme is the premier scheme to have arisen from the late 1980s/early 1990s Cumbria study known as 'Sound Linkage'. Two series of experiments can be analysed as having arisen from that study, one maintaining and analysing Reading Intervention as a mainstream initiative, the other seeking strategies that might prove effective with children with specific difficulties and/or very low attainment, or in preventing difficulties arising in the first place. The first of these two series is analysed in this section, the other in [chapter 4](#). Together, the two series represent the most comprehensive and sustained programme of research on boosting low attainment in reading in the UK. The programme was for many years run from the University of York. All the key figures have now left there, but their work is continuing.

The Cumbria 'Sound Linkage' study supports the view that it is the combination of phonological training and reading practice that is important for helping poorer readers. Children are helped to isolate phonemes within words to appreciate that sounds can be common between words and that specific sounds can be represented by particular letters. Lessons also include story work with an emphasis on linking sounds in words with letters.

It is well documented that children who exhibit good phonological skills appear to make the most progress in learning to read. This study illustrates that a combined phonological and literacy skills training programme effectively boosts the reading skills of reading-delayed seven-year-olds.

In the original Cumbria study, poor readers in Y2 were assigned randomly to one of four groups. Group one received training in phonological skills and help in learning to read. Pupils in the second group received teaching in reading alone – the teaching of reading here and in the first group was similar to the form of Reading Recovery then current, with little phonological training. The third group received teaching in phonological skills alone. A control group received normal teaching. During the intervention period, which lasted 20 weeks, each of the experimental groups received forty 30-minute teaching sessions.

The reading with phonology package combined a highly structured set of finely graded reading books with systematic activities to promote phonological awareness. The first part of a session was devoted to re-reading a familiar book whilst the teacher kept a running record of the child reading. This allowed for rehearsal of familiar words in different contexts. Phonological activities and letter identification were also involved in the first part of the session, accomplished using a multi-sensory approach (feeling, writing and naming). The second part of the session involved writing a sentence, cutting it up and re-assembling it. The last part of the session introduced a new book.

### Evaluations

The first was a very tightly designed and administered quasi-experiment, carried out by Peter Hatcher, an educational psychologist in Cumbria LA, and two colleagues from the University of York (Hatcher *et al.*, 1994). The four groups were matched on reading age at pre-test, and teaching time for the three experimental groups was equated as closely as possible. The 93 children in the three experimental groups were taught by 23 teachers. Each teacher worked with groups of two to nine children in order to reduce the effect of differentiation. The time of day at which children received their intervention was systematically varied. The people who administered the tests (who were not the teachers) were unaware of the children's experimental status.

The Reading with Phonology group made modest progress in reading (both accuracy and comprehension) and spelling, but still significantly more progress than the other three groups; the other groups did not differ – in other words, neither reading-only nor phonology-only brought about any greater progress than normal teaching.

Much the same finding emerged from a very similar study in Rhode Island, USA (Iversen and Tunmer, 1993), in which the reading intervention was the authorised form of Reading Recovery.

The reading with phonology approach, now known as the Reading Intervention Programme – or as Sound Linkage (Hatcher, 1994), the name of published materials derived from and supporting it – continues to be widely used in Cumbria, and Peter Hatcher (1996a, b, 2000) has published further research on it. This showed that the initiative continued to be effective for the generality of poor readers. (However, in the Hatcher (2000) study it seemed no more effective for children with dyslexia or moderate learning difficulties than no intervention – see [chapter 4](#).)

In 2011, colleagues working in North Yorkshire supplied data on 720 children who had gone through the programme there between 2005 and 2010. All five cohorts had made substantial progress in reading accuracy.

### **References**

Hatcher (1992, 1994, 1996a, b, 2000), Hatcher *et al.* (1994), unpublished data supplied by Christine Noyes

### **Contact**

[www.thereadinginterventionprogramme.org.uk](http://www.thereadinginterventionprogramme.org.uk)

### 3.17 Reading Recovery

Reading Recovery (RR) arose out of an extensive research project carried out in New Zealand by Marie Clay, who died while the 2007 edition was being prepared. RR identifies children who are having difficulty in acquiring literacy skills at an early stage of their school career and aims to provide help before problems become entrenched. The programme is delivered for 30 minutes a day, by a specially trained teacher. The lesson consists of a series of activities, including reading two or more books, one familiar and one new. It encourages children to monitor their own reading.

#### Scheme

RR is aimed at children who during or at the end of their first year of schooling show they are having difficulty with reading. In the UK, within schools which are thought to be in most need of the programme, the children who are identified as being in the bottom 20% of the class in reading receive the programme – they are probably in the bottom 5–6% nationally. The selected children receive daily 30-minute individual lessons for up to 20 weeks from a specially trained teacher, who provides highly responsive instruction tailored to the needs of each child. Throughout the lesson the teacher's interventions, based on daily diagnoses, are carefully geared to identify and praise successes, promoting confident and independent behaviour. This ensures that a range of strategies are brought to bear whenever problems arise. Children leave the programme (are 'successfully discontinued' or, in more recent RR parlance, 'have achieved accelerated learning') when reading improves to the level of the average reading group in their class, enabling them to work in class without additional support. Children who are not successfully discontinued are referred for more detailed assessment and specialist help.

The first LA in the UK to introduce Reading Recovery was Surrey, in 1990 (Prance, 1992; Wright, 1992). In 1992, 20 other LAs in England and Wales received central government funding to introduce it, and it was later taken up by other LAs in England and Wales, and by all the Education and Library Boards in Northern Ireland (Gardner *et al.*, 1997; Munn and Ellis, 2001). Central government funding ceased in England and Wales in 1995, leading to a period of decline in numbers of trained teachers, of LAs providing it, and of children receiving it. *Every Child a Reader* (undated but known to have been published in 2006, p.9) reported that:

In 2004–5 the programme was provided to 5,300 children in the UK and Ireland. It is very widely used in both Northern Ireland and in the Republic of Ireland, but in England the number of children involved has until recently been declining. Of 600 teachers who had been trained in Reading Recovery in England, only 60 were able to provide the programme ... in 2004–5.

But then in 2005 a consortium of charitable trusts and businesses provided £4.5m over three years, matched by the DfES, for a revived RR initiative in England, called 'Every Child a Reader' (ECaR). In the first year, 2005–06, £1m was allocated. This funded RR training in several areas, including five London boroughs, plus an evaluation based in those boroughs and five others in London which provided a comparison group (and were to receive training in 2006–07, along with others elsewhere in England). ECaR and therefore Reading Recovery had ring-fenced funding until 2010/11. Following the change of government the funding was maintained but the ring-fencing was removed, causing a drop in the number of children in England receiving the programme from 21,000 in 2010/11 to 12,000 in 2011/12.

#### Evaluations

The original request for information for the 1998 version of this report produced more replies about RR than about any other initiative. They constituted about a quarter of all the information received then, and more was received in 2002. Unfortunately, however, most of those reports provided neither an impact measure nor data from which such a measure could be calculated. The most important exception was the Institute of Education, University of London (IoE) study of RR in six London boroughs and Surrey. This was later massively supplemented by reports on ECaR in London and on Reading Recovery across Britain and Ireland. The IoE and ECaR in London studies included carefully chosen comparison groups. In 2012 very useful data on a study in Bristol became available. All four of these studies are analysed in this edition.

It is worth saying that in the interim between the London and Surrey and ECaR studies, RR changed considerably to reflect international research, mainly to include a large amount of phonological awareness and phonics.

None of these studies used an RCT design. However, early in 2007 the What Works Clearinghouse (2007a, b) in the USA produced a report on a meta-analysis of the five most rigorous studies on RR, all conducted in the USA. This showed positive effects on both reading accuracy (word identification) and comprehension.

## References

Clay (1979, 1985, 1993), Gardner *et al.* (1997), Munn and Ellis (2001), Prance (1992), What Works Clearinghouse (2007a, b), Wright (1992)

### (1) London and Surrey

The definitive account of this study is Hurry and Sylva (2007). The progress made by a group of children receiving RR was compared with that made by two comparison groups, one in the same schools as the RR children, the other in different schools. Between pre- and post-test the RR group made significantly greater progress than both comparison groups in reading accuracy and reading comprehension.

At a one-year follow-up, the RR children were no longer ahead of, but had still made significantly better progress than, the between-schools comparison group on both aspects, but had no longer made significantly better progress than the within-schools comparison group.

At a three-year follow-up, the RR group were no longer significantly better in general than either of their comparison groups. However, children who had been complete non-readers at the pre-test at age 6 did stay ahead of comparable children in the comparison groups. 'For the children who were not reading at all at 6 years old, Reading Recovery was more effective [for reading] at every follow-up point than for slightly better readers' (Hurry and Sylva, 2007: 243).

But then again, at the three-year follow-up all groups were well behind national norms in reading: '[I]t would appear that, in the long-term, ... the intervention had [not] allowed the children to overcome their poor start with reading' (Hurry and Sylva, 2007).

## References

Hurry and Sylva (1998, 2007), Sylva and Hurry (1995a, b, 1996)

### (2) Every Child a Reader in London

The comparison group (N=147) made less than standard progress, and was therefore falling relatively further behind. The experimental group (N=87) made substantial to remarkable progress. Data from a one-year follow-up in 2007 suggested that both the groups had made either standard progress or slightly more. The experimental group's averages were close to c.a., but the comparison group's were still about a year behind.

A further follow-up was conducted in the summer of 2009, three years after the intervention ended, when the children were at the end of Y4 (Hurry and Holliman, 2009). Unfortunately, no data directly comparable with those from earlier assessments could be obtained.

## References

Burroughs-Lange (2006, 2008), Burroughs-Lange and Douëttil (2007), Every Child a Reader (undated but known to have been published in 2006), Hurry and Holliman (2009)

### **(3) Reading Recovery in Britain and Ireland**

The initial sample here was very large (10,918). There was a substantial gain in reading accuracy. Evidence from follow-up testing showed that both discontinued and referred children made standard progress over the next six months, although the referred children were a year behind those who had been discontinued.

#### **Reference**

European Centre for Reading Recovery (2012)

### **(4) Bristol**

This local study contained 360 children – more than the main experimental group in either of the London studies. It showed a useful impact on reading accuracy.

#### **Reference**

Miles and Armstrong (2011)

#### **Contact**

European Centre for Reading Recovery at the Institute of Education, University of London  
<http://www.ioe.ac.uk/research/4399.html>

## 3.18 Reciprocal Reading

### Scheme

Reciprocal Reading was developed in New Zealand in the 1980s but has not been much used in the UK until recently. It is a group approach to reading intended to boost both accuracy and comprehension, in particular the comprehension of children whose understanding of texts lags behind their reading accuracy. It is based on two sessions a week for 10–12 weeks, to enable children to develop confidence in using the strategies. The Reciprocal Reading strategies can also be used in shared reading. The teacher models the use of the four strategies (predicting, clarifying, questioning and summarising). The children take ownership of these tasks as they become familiar with them.

### Evaluation

A pilot study was conducted in four primary schools in Middlesbrough in 2011. The 48 children had comprehension ages well below their accuracy ages. They made remarkable progress in both aspects.

### Reference

Unpublished data supplied by Andy Taylor and Jill Canning

### Contact

Andy Taylor  
Training and Development Manager  
Fischer Education Project Ltd  
Cargo Fleet Offices  
Middlesbrough Rd  
Middlesbrough TS6 6XH  
T: 0770 2781745  
[andy.taylor@fischertrust.org](mailto:andy.taylor@fischertrust.org)  
[www.fischertrust.org](http://www.fischertrust.org)  
[www.literacy.fischertrust.org](http://www.literacy.fischertrust.org)  
[literacy@fischertrust.org](mailto:literacy@fischertrust.org)

## 3.19 Reciprocal Teaching

### Scheme

The Reciprocal Teaching Method is a teaching approach first described by Palincsar (1982) and then further developed by her and Brown (Palincsar and Brown, 1984; Palincsar, 1986). They describe it as

A procedure ... where teacher and student took turns leading a dialogue concerning sections of a text. Initially the teacher modelled the key activities of summarising (self-review), questioning (making up a question on the main idea), clarifying and predicting. The teacher thereby modelled activities: the students were encouraged to participate at whatever level they could. The teacher could then provide guidance and feedback at the appropriate level for each student.

(Palincsar and Brown, 1984: 124)

The four activities are seen as having two functions – ‘comprehension-fostering and comprehension-monitoring’ (p.121). Pupils are gradually encouraged to take over the teacher role as they gain confidence, and the whole approach is predicated on the idea that poorer comprehenders can improve by being shown and explicitly understanding and adopting good comprehenders’ strategies.

### Evaluation

There has been a large amount of research on the technique in North America – where Rosenshine and Meister (1994) did a meta-analysis on the 16 most rigorous studies and produced an effect size of 0.32 on standardised tests – but very little in the UK. For the 2007 edition Christa Rippon supplied data on 88 children from Haringey, and the analysis of those data remains in this edition. The results showed a useful gain in reading accuracy and a substantial one in comprehension.

### References

Palincsar (1982, 1986), Palincsar and Brown (1984), Rosenshine and Meister (1994), and unpublished data supplied by Christa Rippon

## 3.20 SIDNEY (Screening and Intervention for Dyslexia, Notably in the Early Years)

### Scheme

SIDNEY's aims are to:

- reduce the number of pupils who fail to learn to read during KS1, and hence the number who require high levels of resources to support access to the curriculum in KS2
- reduce the number of pupils who develop behavioural and emotional difficulties as a result of their failure to learn to read effectively
- improve the quality of teaching during KS1 by extending the knowledge and skills of teachers and assistants.

Hampshire primary schools are asked to screen all pupils in the last term of their Reception Year (using either the Dyslexia Early Screening Test (DEST) or Lucid CoPS), to identify pupils who are likely to experience literacy difficulties. During their first term in Year 1, pupils so identified work through an intervention programme, which was written jointly by local advisers and educational psychologists. The intervention programme is designed to be used by an LSA for 15 minutes per day on a one-to-one basis. The aim is that pupils should attain the level expected by the (former) Primary National Strategy by the end of Year 1, term 1 (i.e. to be able to spell CVC words accurately, with correct letter formation).

The intervention programme is broken up into prescribed lessons and is scripted to enable LSAs to carry out the programme with a minimum of training and support. It consists of two strands:

- the core route (multi-sensory, cumulative teaching of sound-symbol links, plus blending of phonemes)
- the phonological route (training in phonological awareness including rhyming, syllabification, blending and segmenting).

Many schools have developed their own practice in using the SIDNEY programme. Where schools have identified large numbers of pupils who require support, they typically work on a one-to-one basis with those at 'moderate risk' of reading failure during the autumn term. These pupils often make rapid progress and by the end of the term are able to work with the rest of the class during word-level work without needing further individual support. This then allows time for the LSA to support those at 'high risk' on a one-to-one basis during the spring and summer terms.

### Evaluation

The scheme was evaluated locally in Hampshire in the autumn term of 2004, with children at 'moderate risk'. It showed a useful gain in reading and phonological skills. The test used was the Word Reading and Phonic Skills (WRAPS) test, which returns a combined measure of these areas.

### References

Norgate and Bentote (2005), and unpublished data supplied by Roger Norgate

### Contacts

To purchase the materials or for further general information, contact Linda Elliott [linda.elliott@hants.gov.uk](mailto:linda.elliott@hants.gov.uk)  
For information on training, contact Pauline Bentote [pauline.bentote@hants.gov.uk](mailto:pauline.bentote@hants.gov.uk)  
For information on the evaluation, contact Roger Norgate [Roger.norgate@hants.gov.uk](mailto:Roger.norgate@hants.gov.uk)

## 3.21 Sound Discovery®

### Scheme

Sound Discovery® is a synthetic phonics programme for the teaching of reading, spelling and writing developed by Dr Marlynne Grant, educational psychologist in South Gloucestershire, and first published in 2000. The children are taught grapheme-phoneme correspondences and the phonic skills of segmenting and blending, and how to use this knowledge in reading and writing. It is delivered through three sessions a week of Snappy Lesson®. These are fast-paced and consist of appropriate multi-sensory activities. They were originally intended to be delivered to small groups of children. There are seven steps. Step 1 is based on the letters of the alphabet, Step 2 introduces some consonant and vowel digraphs, and the main alternative vowel and consonant spellings are covered in Step 3, etc. As originally used in South Gloucestershire it is a Wave 1 programme and therefore not analysed here; however, extensive data have been gathered on it there over ten years.

### Evaluations

Data on Sound Discovery® as a catch-up programme were available from a study in Norfolk in 2005, and a study in one large middle school in Bedfordshire in 2005–07. The Norfolk study found a substantial gain for comprehension and the Bedfordshire study useful progress in spelling.

### References

Grant (2000), Worsley (2005), Wainwright and Grant (1999), unpublished data supplied by Jo Padbury via Marlynne Grant

### Contacts

[info@syntheticphonics.net](mailto:info@syntheticphonics.net)

<http://www.syntheticphonics.net/>

## 3.22 Sound Reading System

### Scheme

The Sound Reading System is a synthetic phonics reading and spelling programme based on a prototype distilled by Diane McGuinness from the research data of the past 40 years. Each lesson works to promote skill in phoneme segmenting and blending, the mastery of sound-symbol relationships, handwriting, spelling, reading fluency, and reading comprehension. Children learn that the English writing system is a code, and precisely how this code works. The intervention is delivered one-one, once trained, by teachers, LSAs, TAs and SENCOs.

### Evaluation

Fiona Nevola has been running the scheme since 2003, and supplied data on 140 children, young people and adults who had been through it up to 2007. The results showed remarkable progress in reading accuracy, comprehension and spelling. For some results from a Young Offenders Institution see [chapter 6](#).

### Reference

Unpublished data supplied by Fiona Nevola and Diane McGuinness

### Contact

Fiona Nevola  
[fiona.nevola@gmail.com](mailto:fiona.nevola@gmail.com)  
[www.soundreadingsystem.co.uk](http://www.soundreadingsystem.co.uk)

### 3.23 Sound Training for Reading®

#### Scheme

This scheme was developed by Katy Parkinson in Middlesbrough to help pupils in KS3 with reading difficulties. Although it is now used in KS2 and KS4 as well, I have kept its main description in the KS3 section because the majority of participants are secondary pupils – see [section 3.34](#). The only difference between the primary and secondary versions is that the primary version is delivered for 45 minutes per week over a period of eight weeks.

In 2010-12 the scheme was evaluated in KS2 in a number of schools in Middlesbrough and Co. Durham. The results showed remarkable progress in reading accuracy.

## 3.24 The Complete Spelling Programme

### Scheme

This is a structured and developmental programme designed for use in primary school and for whole-class teaching. Spellings are planned for each school year and structured into daily word groups. The phonological element of the programme is structured in such a way as to ensure the development of the mental lexicon (mental dictionary for whole words and letter patterns) alongside compatible phonological knowledge. This allows interaction between both knowledge bases. In addition to this children learn how to process high-frequency words that cannot be encoded using sound–symbol relationships. Rhyme patterns, high-frequency words and curriculum word banks are included in the programme. The programme has three levels, allowing all ability groups to learn together. There are also weekly dictation sentences and teaching notes. Learning is reinforced through support materials that are differentiated for differing abilities. These support materials include a range of activities designed to engage all processes involved in learning to spell and to provide opportunities for application of spellings learned in independent writing.

### Evaluation

The first author of the scheme, Sharon McMurray, carried out a two-group quasi-experiment in four schools in Northern Ireland in 1999–2001. The experimental group made remarkable progress, and substantially outperformed the comparison group.

### References

McMurray (2006), McMurray and Fleming (1998)

### Contact

Sharon McMurray  
[spgb12@yahoo.com](mailto:spgb12@yahoo.com)

## 3.25 THRASS (Teaching Handwriting, Reading and Spelling Skills)

### Scheme

THRASS is a structured multi-sensory literacy programme which teaches children about letters, speech sounds (phonemes) and spelling choices (graphemes). It is divided into the three main areas of handwriting, reading and spelling. It increases understanding of the way the English language is structured, with 44 phonemes, of which 20 are vowel sounds and 24 are consonant sounds. Children learn immediately that the same sound can be represented by different letters or groups of letters (graphemes).

THRASS was developed by Alan Davies, an educational psychologist then at Manchester Metropolitan University. The programme has been continuously developed and revised, and in 1997 became available on computer.

Davies found that the problem many people have while learning to read and write is that there are 44 sounds or phonemes in most well-known accents of English, yet only 26 letters to represent them. Therefore, the central feature of the scheme is that children are taught explicitly about the variety of grapheme-phoneme and phoneme-grapheme correspondences of English. Teachers are given training in the use of materials (video, workshops, audio cassettes, computer program and an instruction booklet). A typical THRASS lesson might include identifying upper- and lower-case letters by name, and writing each letter while listening to verbal instructions. Children are introduced to common sequences such as days of the week and seasons. During each lesson new learning is introduced, but there is always practice of material already covered. Children are encouraged to work together, while the teacher provides positive encouragement and reinforcement for correct responses.

### Evaluations

Though THRASS has been extensively studied in the UK, Australia, the Caribbean, Botswana and South Africa, almost all the work has considered its use as an initial, across-the-board scheme, and there is little evidence on its value as a catch-up intervention. The main set of data, provided by THRASS itself, is from the 'Special Initiative to Enhance Literacy Skills in Bridgend' conducted there with pupils in Y3–8 in 1998. Both reading and spelling were assessed. The results showed useful to substantial impact on reading for all year-groups, and on spelling in Y3. (For Y7–8, see [section 3.36](#).) Data from an evaluation in Hampshire in 2005 also provide evidence of a useful gain in reading (spelling was not assessed).

### References

Matthews (1998), unpublished data supplied by Roger Norgate via Alan Davies

### Contact

THRASS (UK) Ltd  
Units 1–3 Tarvin Sands  
Barrow Lane  
Tarvin  
Chester CH3 8JF  
[www.thrass.co.uk](http://www.thrass.co.uk)

## 3.26 Toe by Toe®

### Scheme

Keda Cowling worked on this scheme for more than 25 years. It is a highly systematic page-by-page and step-by-step series of activities in one book, delivered one-to-one, with instructions for the 'coach' provided for each activity. It deliberately takes learners right back to the beginning of phonics and works up from there, based on the observation that many learners with difficulties seem never to have got the hang of phonics. Unusually, many of the stimuli are non-words in order to focus learners' attention solely on decoding and avoid guessing based on any other 'cue'. It is suitable for any child (or adult) with reading difficulties, especially those who have been diagnosed as having specific learning difficulties. The author states that parents, special needs teachers, and support, teaching and classroom assistants can all use the scheme effectively. It is intended that learner and coach should work through the entire scheme, however long that takes, and then graduate to simple reading books.

### Evaluation

A fairly large amount of quantitative data on the scheme's effectiveness in Scottish Primary 5–7 (equivalent to England and Wales Y5–7, hence partly KS2 and partly KS3 but treated here as primary) was obtained from the West Dunbartonshire Literacy Initiative. The results suggest that, when delivered meticulously, this programme can achieve useful gains.

### Reference

MacKay (2006)

### Contacts

Keda Cowling and Harry Cowling  
[www.toe-by-toe.co.uk](http://www.toe-by-toe.co.uk)

Psychology Consultancy Services  
Ardoch House  
Cardross  
Dunbartonshire G82 5EW  
T/F: 01389 762905  
[Tommy@ardoch.fsnet.co.uk](mailto:Tommy@ardoch.fsnet.co.uk)

## B. Reading and spelling schemes – KS3

In addition to those listed in this section, there are data for pupils aged 11–14 mixed in with those for primary pupils in the following schemes listed in the previous section: AcceleRead AcceleWrite, Catch Up Literacy, Paired Reading, Toe by Toe.

### 3.27 Better Reading Partnership

#### **Scheme**

For general details of the scheme, see [section 3.5](#).

#### **Evaluation**

The only secondary data available were for Y7–8 in Derbyshire. Both gains were substantial.

#### **Reference**

Taylor (2000)

#### **Contact**

Gill Cartwright

Literacy Consultant & National Trainer for Better Reading Partnership  
Education Works Ltd  
T: 07538 532484

[gill.cartwright@educationworks.org.uk](mailto:gill.cartwright@educationworks.org.uk)

[www.educationworks.org.uk](http://www.educationworks.org.uk)

<http://www.educationworks.org.uk/who-we-are/gill-cartwright.html>

## 3.28 Catch Up Literacy

### Scheme

For general details of Catch Up Literacy, see [section 3.6](#), and for a pilot project with Gypsy Roma Travellers, see [chapter 6](#).

### Evaluations

For publication in Brooks (2009) data on 175 Y7–9 pupils in 13 schools in two LAs in Wales for the period 2002–06 were supplied, and are reproduced here. (N.B. A few of the schools were Welsh-medium, but their results could not be separated out in the data supplied.) The results showed useful progress in reading comprehension.

In addition, Holmes *et al.* (2011, 2012) give details of an RCT conducted with secondary pupils in Nottingham. The experimental group made substantial progress, and much more than the control group, who made barely more than standard progress.

### References

Brooks (2009), Holmes *et al.* (2011, 2012), unpublished data supplied by Julie Lawes

### Contact

Julie Lawes, Director  
Catch Up  
Keystone Innovation Centre  
Croxtan Road  
Thetford IP24 1JD  
T: 01842 752297  
F: 01842 824490  
[www.catchup.org](http://www.catchup.org)

## 3.29 Corrective Reading

### Scheme

Corrective Reading is published by McGraw-Hill under the SRA imprint. It aims to provide intensive intervention for students who are reading one or more years below their c.a.. The materials come in three strands, Decoding, Comprehension and Workbooks, and in four levels within each strand. The Decoding strand moves up from word attack (65 lessons) through two levels of decoding strategies (65 lessons each) to skill applications (125 lessons). The Comprehension strand moves up from 'Thinking Basics' (60 lessons) through two levels of comprehension skills (60 and 65 lessons) to 'Concept Applications' (140 lessons).

### Evaluation

The only data available came from one secondary school in Kent, which adopted it in September 2006 'as a way of radically addressing the very low literacy levels of a large number of [its] students on entry'. The pupils received six programme lessons a fortnight delivered by teachers and TAs. There was a substantial improvement in reading.

### Reference

Kirby (2007), unpublished but supplied by Caroline Jennings

### Contact

Customer Services  
SRA/McGraw-Hill  
FREEPOST LON 16295  
Maidenhead SL6 2BT  
T: 01628 502 730  
F: 01628 635 895  
[sra\\_info@mcgraw-hill.com](mailto:sra_info@mcgraw-hill.com)  
<http://mcgraw-hill.co.uk/sra/correctivereading.htm>

### **3.30 ENABLE-PLUS (KS3)**

#### **Scheme**

For general details of ENABLE-PLUS (KS3), see [section 3.9](#).

#### **Evaluation**

The KS3 evaluation analysed in the Appendix to Part 1 was carried out by the authors of the scheme. It showed a substantial gain in reading comprehension.

#### **References**

Bowen (2003), unpublished data supplied by Phil Bowen

#### **Contact**

Jan Shearer/Moira Tallents  
Sandwell Inclusion Support, Connor Education Centre  
Connor Road  
West Bromwich  
West Midlands B71 3DJ  
T: 0845 3527552  
[Jan\\_Shearer@sandwell.gov.uk](mailto:Jan_Shearer@sandwell.gov.uk)

## 3.31 Inference Training

### Scheme

For general details of the intervention see [section 3.11](#).

### Evaluation

In 2009–11 data were gathered from 120 KS3 pupils in Leicester. The results showed a useful gain in reading accuracy.

### Reference

Unpublished data supplied by Tony Whatmuff

### Contact

Tony Whatmuff  
Special Needs Teaching Service  
Leicester Local Authority  
T: 0116 225 4800  
[Tony.Whatmuff@leicester.gov.uk](mailto:Tony.Whatmuff@leicester.gov.uk)

## 3.32 Rapid Plus

### Scheme

Rapid Plus is a new series of finely levelled books and software for SEN and struggling readers at KS3. It is built upon the primary Rapid programme (which was included in the third edition but is not in this one) and uses many of the same elements, but with new stories, topics and a grown-up look and feel to appeal to teenage readers. The authors extensively researched story topics, artwork styles and layout options with SENCos, TAs and students to find out what they wanted, and tested stories at every stage of development and production.

The series covers National Curriculum levels 1a–3a (reading ages 6:6–9:6), and each reading book contains a fiction and a non-fiction text to give students variety and a broad reading experience. The reading books use a dyslexia-friendly font on a plain cream background, and contain supportive artwork and photos. They also have a 'before reading' page to tune readers in to the story, and a quiz page to test comprehension, word knowledge and spelling.

The Rapid Plus online software brings together all the reading books as e-books, with innovative features such as 'Read to me', where students can hear the story read in a fluent, engaging way, and clickable prompts, so they can hear a particular word if they get stuck on it. There are also interactive activities to test comprehension, spelling and word knowledge. The software keeps track of how students have performed, so that teachers can quickly and easily track progress.

The teaching guide includes step-by-step guidance for one-to-one and group reading, suitable for specialists and non-specialists. It also contains activities for independent follow-up work.

### Evaluation

An independent pilot study was run in Neath and Port Talbot between February and May 2012. Data were supplied on 36 KS3 pupils (and two in Y10) who were struggling with reading. The results showed substantial gains in both accuracy and comprehension.

### Reference

Unpublished report and data supplied by Alison Beynon via Robert Nottage

### Contact

<http://www.pearsonschoolsandfecolleges.co.uk/Secondary/EnglishAndMedia/LearningSupport/RapidPlus/RapidPlus.aspx>

### 3.33 Read Write Inc. Fresh Start

#### Scheme

This is Ruth Miskin's secondary and upper KS2 (Y5–8/9) phonics programme. For general details, see [section 3.15](#).

#### Evaluations

The best sets of data on Read Write Inc. Fresh Start at KS3 came from one secondary school in Leicester (Lanes *et al.*, 2005) and another in Cornwall (unpublished data supplied by Rosemary Austin). Data were gathered on 63 and 27 pupils respectively. The results showed a substantial improvement in reading accuracy (Leicester), and a substantial improvement in comprehension (Cornwall).

#### References

Lanes *et al.* (2005), unpublished data supplied by Rosemary Austin

#### Contact

Julia Hart

T: 01943 605200

<http://www.ruthmiskinliteracy.com/contact.aspx>

[www.readwriteinc.com](http://www.readwriteinc.com)

### 3.34 Sound Training for Reading®

This scheme was developed by Katy Parkinson in Middlesbrough to help pupils in KS3 with reading difficulties. Although it is now used in KS2 and KS4 as well, I have kept its main description in this section because the majority of participants are secondary pupils.

#### Scheme

Pupils, in groups of four, attend six one-hour sessions over a period of six weeks. The delivery is very intensive and very repetitive using multi-sensory teaching methods. The pupils are explicitly taught syllabification. All tasks must be completed accurately, fluently and automatically in order to progress with reading.

Pupils are given instruction on short and long vowel sounds along with an explanation of open and closed syllables.

#### Task 1 – syllable tasks

The group has to read, at speed, a pack of syllable cards and then spell selected syllables. Speed and accuracy are recorded for both these tasks.

#### Task 2 – word-building tasks

Pupils are provided with packs of syllables from which they build KS3 subject words. The pupils listen to the target word being spoken, count the number of syllables within the word, select the syllable cards and build the word. In turn they read the words and discuss definitions.

#### Task 3 – speed reading

Pupils read from a pack of cards that have been colour-coded, e.g. in the word 'condensation' the second and fourth syllables are printed in red.

Tasks 1, 2 and 3 are timed and completed each week using different target words.

#### Task 4 – Prefixes, suffixes and root words

Towards the end of the programme pupils work on packs of words containing prefixes and suffixes and discuss the effect they have on the meanings of the root words.

#### Evaluation

This was carried out by the author in one secondary school in Middlesbrough. The experimental pupils made a modest gain in reading, but meanwhile the comparison group fell steadily further behind, so that the experimental group's gain was significantly greater than the comparison group's.

#### Reference

Unpublished data supplied by Katy Parkinson

#### Contact

Katy Parkinson  
Boho One  
Bridge Street West  
Middlesbrough TS2 1AE  
T: 01642 424298  
[enquiries@soundtraining.co.uk](mailto:enquiries@soundtraining.co.uk)

### 3.35 Thinking Reading

#### Scheme

Dianne Murphy developed this programme on Direct Instruction and Precision Teaching principles. Students attend three half-hour lessons a week. Each lesson has two sections: Sight Word Recognition and Reading Graded Prose.

Words for sight recognition are drawn from a first and second 1,000 list of commonly used words (derived from a number of sources) that were read incorrectly or unknown on initial assessment, and this section has three phases:

- Acquisition – students are taught five new words a day presented in flashcard format.
- Accuracy – firstly in flashcard format (ten known sight words), in which the student must read accurately the previously taught words, over three consecutive lessons, and also in probe sheet format, in which the student must achieve 50/50 in a randomly-ordered selection of previously taught words.
- Fluency – timed in probe sheet format, in which the student must achieve at least 80/min reading from a randomly-ordered selection of known words.

Reading text in prose form also has three phases:

- **Pre-teaching**, using examples from the text about to be read:
  - Acquisition and accuracy of vocabulary
  - Acquisition and accuracy of phonetic analysis
  - Acquisition and accuracy of syntactic analysis
- The student **reads aloud** the text while a running record is taken. Students are able to select their choice of text from a number of texts at the required level.
- **Comprehension** questions relating to the specific skill areas of: literal, reorganisation, inference and evaluation.

#### Evaluation

Over a period of three years Dianne Murphy pre- and post-tested 44 students in one high school in Hammersmith and Fulham, using the Probe Reading Assessment. This is one of very few schemes with at least some data from students in KS4 as well as KS3 – but only five were in KS4. The average time students followed the programme was unusually long – 14 months. The results showed a remarkable gain in reading accuracy.

#### Reference

Unpublished data supplied by Dianne Murphy

#### Contact

Dianne Murphy  
<http://thinkingreading.net>

### **3.36 THRASS (Teaching Handwriting, Reading and Spelling Skills)**

#### **Scheme**

For main details of THRASS, see [section 3.25](#).

#### **Evaluation**

Data for THRASS in KS3 (Y7) come from a study carried out in Bridgend in 1998. The results showed remarkable impact on reading accuracy and comprehension. More recent data from a secondary school in Sheffield in 2008 show substantial progress in spelling.

#### **Reference**

Matthews (1998), unpublished data supplied by Yewlands Secondary School (now Yewlands Technology College) via Alan Davies

#### **Contact**

THRASS (UK) Ltd  
Units 1–3  
Tarvin Sands  
Barrow Lane  
Tarvin  
Chester CH3 8JF  
[www.thrass.co.uk](http://www.thrass.co.uk)

### 3.37 Toe by Toe®

#### Scheme

For main details of Toe by Toe, see [section 3.26](#). Besides being used in many schools, it is in widespread use in prisons and Young Offender Institutions and with young people being supervised in the community.

#### Evaluation

Published research includes a matched-pairs quasi-experimental study of 24 Scottish secondary pupils aged 12–14. The experimental group were taught individually for 20 minutes per day, five days per week, for an average of three months, while the control group received normal learning support. The experimental group made a useful gain, while the control group made about one-third of normal progress.

#### Reference

Mackay (2006)

#### Contacts

Keda Cowling and Harry Cowling  
[www.toe-by-toe.co.uk](http://www.toe-by-toe.co.uk)

Psychology Consultancy Services  
Ardoch House  
Cardross  
Dunbartonshire G82 5EW  
T/F: 01389 762905  
[Tommy@ardoch.fsnet.co.uk](mailto:Tommy@ardoch.fsnet.co.uk)

# C. Schemes for improving writing at primary and KS3 levels

## 3.38 Paired Writing

### Scheme

Paired Writing is another in the suite of innovations devised and researched by Keith Topping and colleagues (see Cued Spelling and Paired Reading, [sections 3.7](#) and [3.13](#)). Topping (2001: 141, 144) describes it as follows:

Paired Writing ... is a framework and set of guidelines to be followed by pairs working together to generate a piece of writing for a purpose. It gives a supportive structure to scaffold interactive collaborative behaviours through all stages of the writing process... [It] consists of

6 STEPS +

10 Questions (Ideas)

5 Stages (Drafting)

4 Levels (Editing)

As with Cued Spelling, Topping stresses that Paired Writing 'is a lot simpler than it looks'. And again as with Cued Spelling and Paired Reading, children are provided with a flowchart as an aide-mémoire – this is downloadable from the website. On each occasion in each pair, one child has the task of writing ('the writer'), while the other supports ('the helper').

### Evaluations

Topping and colleagues have carried out two well-designed and well-executed, though small, randomised controlled trials on Paired Writing.

Sutherland and Topping (1999) studied two groups of 16 children in P4 (equivalent to Y4) in one Scottish primary school, with two equivalent groups of 16 in the same classes in the same school who did not receive Paired Writing training. One experimental group had helpers ('tutors') of the same ability (and swapped roles at intervals), the other had helpers of different ability (and did not swap roles). The cross-ability group made a significant gain during the intervention, while the same-ability group did not (at least in absolute terms – this group's control group's post-test score declined so much that the same-ability group's post-test score was significantly better).

Yarrow and Topping (2001) studied 13 children in one P6 class (equivalent to Y6) in a Scottish primary school, plus 13 of their classmates as a comparison group. The experimental group contained both writers and helpers. Their data are analysed together (as the 'Interaction' group) in the Appendix because the groups would otherwise be too small. The Interaction group made significantly more gain than the No Interaction control group.

### References

Sutherland and Topping (1999), Topping (1995, 2001), Topping *et al.* (2000), Yarrow and Topping (2001)

### Contact

<http://www.dundee.ac.uk/eswce/research/projects/readon/resourcesforteachers/>

### 3.39 Reading Recovery

#### **Scheme**

For main details of Reading Recovery (RR), see [section 3.17](#).

#### **Evaluations**

Of the various RR studies, only Every Child a Reader in London gathered writing data. The experimental group (N=87) made a much larger gain in writing vocabulary than the comparison group (N=147).

#### **References**

Burroughs-Lange (2006), Every Child a Reader (undated but known to have been published in 2006)

#### **Contact**

European Centre for Reading Recovery at the Institute of Education, University of London  
<http://www.ioe.ac.uk/research/4399.html>

## 3.40 Write Away Together

### Scheme

Write Away Together was developed in Redcar and Cleveland in 2001/02. Following successful implementation over several years, it was introduced to other LAs, Education Action Zones and individual schools.

The programme aims to develop children's writing skills through discussions about their independent writing. Focused on individual children who are not making expected gains in writing or are working below national expectations, a Write Away Together session involves a dialogue between the child and the trained partner about a piece of independent writing. As such it links strongly into, and reinforces Quality first teaching. The independent writing can come from any curriculum area.

Aims of the Write Away Together programme:

- To help children see themselves as writers
- To help children see editing as a positive part of the writing/learning process
- To provide the adult partners with a clear structure for writing support
- To improve writing at text, sentence and word level
- To embed strategies that will improve children's independent writing
- To use Assessment for Learning (AfL) to improve writing
- To provide focused training for teachers and TAs to improve writing
- To develop the partnership between teachers and TAs.

Children work with a trained adult for 2 x 20-minute sessions per week for a minimum of ten weeks. The sessions can be run by a teacher or TA. The two-day training helps adults to use the *PRAISE, IMPROVE, PLAN* model which underpins the scheme. Using this model the adult makes a positive response to children's writing, using specific praise to highlight what the child does well. The adult then helps the pupil to understand which text, sentence and word choices will be appropriate for a particular writing task in order to make the writing more interesting/ exciting/clearer to the reader. The final part of the lesson looks at specific text features in order to help the child with planning and with continuing the writing independently.

Results presented are for working one-to-one. The programme has also been developed for use with small groups. Schools are also using the structure for guided writing sessions.

### Evaluation

Data provided on 249 children showed a remarkable gain.

### Reference

Unpublished data gathered by Fischer Education Project Ltd and supplied by Jill Canning

### Contact

[http://www.fischertrust.org/lit\\_write\\_away\\_together.aspx](http://www.fischertrust.org/lit_write_away_together.aspx)

### 3.41 Grammar for Writing

This is the first scheme for secondary writing it has been possible to include – there were none in any of the previous editions. It is listed last in this section because it applies to KS3.

#### Scheme

Debra Myhill, Susan Jones, Helen Lines and Annabel Watson at the University of Exeter devised an ‘intervention [which] comprised detailed teaching schemes of work in which grammar was embedded where a meaningful connection could be made between the grammar point and writing. [The pupils were] taught [each] writing genre over a three week period once a term, and addressed ... writing learning objectives from the Framework for English, part of the English government’s National Strategies for raising educational attainment... [The pupils] were given ... written outcomes for each genre studied: the opening of a story; a written speech; and a portfolio of three specified types of poem. A medium term plan was provided for each [genre], which outlined the time frame, learning objectives [and] assessed outcomes, accompanied by a range of relevant stimulus resources’ (Myhill *et al.*, 2011: 7).

#### Evaluation

This consisted of a very large cluster RCT, with more than 700 Y8 pupils in 31 comprehensive schools divided evenly between the intervention and normal classroom teaching of the set pieces of writing. A detailed marking scheme was applied by an independent organisation with substantial experience in this field (Cambridge Assessment). The experimental group made slightly more progress than the control group, which produced a modest effect size but (because of the large sample) was highly statistically significant.

#### References

Myhill *et al.* (2011, 2012)

#### Contact

Debra Myhill  
[d.a.myhill@ex.ac.uk](mailto:d.a.myhill@ex.ac.uk)

# Part Two: Beyond the mainstream

## Focus and intention of this part of this report

This part of this report is almost wholly new. Here I attempt to go beyond schemes for mainstream children as defined at the beginning of the report to other categories of intervention, which have so far largely suffered from neglect. Part 2 contains chapters on schemes designed:

- for children with specific special educational needs, including dyslexia-SpLD (**chapter 4**)
- to boost literacy at primary/secondary transition (**chapter 5**)
- for young people aged 14–18, including those detached from education or training, including those who have offended or may be at risk of doing so (**chapter 6**).

These three chapters give details of 21 schemes which did not feature in the third edition, plus two schemes which focus on children with specific special educational needs (Personalised Learning, now known as Personalised Learning for Reading/Writing, and Phonology with Reading) and two studies (one of Phono-Graphix®, and one within the Reading Intervention series, where Phonology with Reading also now sits) that were ‘mainstream’ in the third edition, but here have been moved to **chapter 4**.

The demarcation between **chapter 4** and Part 1 is slightly fuzzy because four schemes in Part 1 (Cued Spelling, Enable Plus, Read Write Inc. (Bristol study), Sound Discovery) deal largely with children with special educational needs. I have left them in Part 1 because they do not specify which special needs they target, and therefore seem more generalist than any of the schemes in **chapter 4**, all of which are designed for particular categories of special need. SIDNEY is also kept in Part 1, despite the ‘D’ standing for dyslexia, because the description of the participants says simply ‘low attainment’.

As explained in the introduction to Part 1, the criteria for inclusion of schemes in Part 2 are less strict, as shown in the following list:

<b>Part 1 criteria</b>	<b>Relaxations for Part 2</b>
the scheme must be a catch-up intervention, and not an initial and/or preventive scheme	can be initial and/or preventive – see end of chapter 4
the scheme must be currently available	not necessarily – some old schemes are mentioned as sources of ideas
the scheme’s quantitative data must come from one or more studies in the UK	yes
the scheme’s evidence of effectiveness must be based on pre- and post-test data from an appropriate test(s)	not necessarily – some schemes which look promising don’t have this sort of evidence
if the data come only from a treatment group the test(s) must have been given to a sample of at least 30 children	not necessarily
but if the data come from studies with more rigorous designs (RCTs, or quasi-experiments with well-matched treatment and comparison groups), the sample size can be smaller	yes
it must be possible to calculate an impact measure (ratio gain or effect size) from the data	not necessarily
the scheme must have shown, in at least one study, a ratio gain of at least 2.0 or an effect size of at least 0.5, that is, at least reasonable effectiveness.	not necessarily

The reason for not applying the same rigour to studies in Part 2 as in Part 1 is that the topics dealt with in chapters 4–6 are relatively new and need a lot of development. However, in Part 2 I do maintain one new rule I imposed in Part 1: where a study present data from a comparison group that was not adequately matched to the experimental group, I ignore the comparison group data, report only the experimental group's data, and characterise the study as a 'one-group pre-test/post-test study'.

Where a scheme has quantitative evidence that allows the full analysis I apply to mainstream schemes, I show the analysis; otherwise I give a narrative summary. For some schemes I give no contact details – they are here to provide ideas.

# Chapter four

## Children with specific special educational needs, including dyslexia/SpLD

### 4.1 Focus

In this chapter I have tried to draw together some of the scattered information on provision for a disparate range of children with specific educational needs (as opposed to those simply described generally as ‘SEN’ – for schemes with that description of the target population see [chapter 3](#) and the Appendix to Part 1). Most of this chapter concerns children with dyslexia/SpLD, but there are also mentions, at least, of children receiving free school meals, looked-after children, children with various specific problems (including ADHD, autism, speech and language difficulties), children with moderate learning difficulties, children with reading comprehension difficulties, and children with Down’s syndrome. The studies on the last three groups are the work of the team who devised and researched the Reading Intervention Programme. They are part of the on-going attempt by that team to boost the attainment of children at the very lowest end of the curve, those whose attainment even the most focused teaching sometimes seems powerless to improve; and I have included some reflections on their search for ways to prevent problems arising in the first place via accurate early identification of children likely to struggle.

### 4.2 Children receiving free school meals

By far the largest group of children with special needs is those receiving free school meals. About one sixth of all state school children in Years 1–11 in England receive FSM, and the government’s Pupil Premium is paid to schools and others who have care of such children (including looked-after children). In 2012–13 it is being paid at £600 per child, with a potential total cost of £1.25 billion (and it is going to be increased in 2013–14). The relevant DfE webpage

(<http://www.education.gov.uk/schools/pupilsupport/premium/b0076063/pp> accessed 12/9/12) states:

Schools are free to spend the Pupil Premium as they see fit. However they will be held accountable for how they have used the additional funding to support pupils from low-income families. New measures will be included in the performance tables that will capture the achievement of those deprived pupils covered by the Premium. From September 2012, we will also require schools to publish online information about how they have used [it]. This will ensure that parents and others are made fully aware of the attainment of pupils covered by the Premium.

On 20/9/12, Ofsted published a preliminary analysis of how the Premium had been used in 2011–12, based on interviews with 262 head teachers. The headline finding was that it was not consistently being used in the intended fashion. The extent to which this pattern continues, and how the information schools have to provide will enable the impact of the Premium to be judged are questions for a future edition.

### 4.3 Looked-after children

Relevant studies here (leaving aside possible future evidence from the Pupil Premium) concern Catch Up Literacy and, on a much larger scale, the Letterbox Club.

Holmes *et al.* (2011: 15–16) reported on the use of Catch Up Literacy with looked-after children. Two pilot studies (by Compass Children’s Services, an independent fostering agency based in Leicestershire, and the Norfolk Virtual School for Children in Care) were undertaken in about 2008 to see whether Catch Up Literacy might be used by carers to support children in care who were struggling to learn to read. The studies involved 36 children aged between 11 and 14 whose reading ages were on average more than two years below their c.a.s. The participating children had experiences typical of children in care, including social care placement

moves, exclusion from school, trauma and abuse, which had resulted in a range of behavioural difficulties and emotional problems.

The children in the Compass project (N=10) achieved an average ratio gain of 4.0 after six months and 1.9 after 12 months, while those in Norfolk (N=26) achieved average ratio gains of 2.9 after five months of intervention and 2.4 at the close of the seven-month pilot. Gains in confidence and self-esteem were also widely reported.

The *TextNow* programme (see [chapter 6](#)) has also been used with a small number of looked-after children.

## 4.4 Letterbox Club

### Scheme

The Letterbox Club provides direct support to children in foster care aged 7–11 to improve their educational outcomes. The intervention comprises monthly personalised parcels posted to children in their foster home or other residence between May and October of each year, to cover the summer holidays when there is often a dip in the attainment, attitude and engagement of children in this age group. The parcels contain reading materials, story CDs, stationery and mathematics games at the child's own level of attainment (for English National Curriculum levels 1 to 4). The aim is to improve looked-after children's attainment in reading and number. While it is hoped that many foster carers will join in by reading or playing games with the children, this is not required.

The project began at the University of Leicester in 2002. Small-scale pilot work took place in two LAs in England from 2003 to 2006 and, during this period, a partnership with Booktrust was established. This was followed by a successful bid for a national pilot for 2007 and 2008, funded by the DCSF. In 2007–08, 1,600 children in 23 LAs in England received the parcels. In 2009 the Letterbox Club opened to every LA in the UK, including Northern Ireland, where it is funded through a partnership between charities, Booktrust and the Fostering Network's Fostering Achievement Scheme, and Wales, where it is funded by the Welsh Government. There was further expansion in 2010, with 4,500 children involved, including some in KS3, and 140 LAs, including at least two in Scotland. In 2012 the programme has been extended to children with additional educational needs, and to any child who would benefit, including those placed for adoption and those requiring post-adoption support.

### Evaluations

Researchers at the University of Leicester who had developed the programme evaluated it in primary schools in England and Wales between 2007 and 2010, and in secondary schools in England, Wales and Northern Ireland in 2010. There was an independent evaluation of its use in primary schools in Northern Ireland in 2009–10. All the results showed modest gains in reading, which were in fact useful for these children.

### References

Dymoke and Griffiths (2010), Griffiths *et al.* (2008, 2010), Griffiths and Comber (2011), Winter *et al.* (2011)

### Contact

Leanne Cobb, Project Manager

Letterbox Club

Booktrust

Book House

45 East Hill

London SW18 2QZ

T: 020 8516 2993

[Leanne.cobb@booktrust.org.uk](mailto:Leanne.cobb@booktrust.org.uk)

[www.letterboxclub.org.uk](http://www.letterboxclub.org.uk)

## Letterbox Club

### (1) England and Wales (for Y7–8, also Northern Ireland)

**Main references:** Griffiths *et al.* (2008, 2010), Griffiths and Comber (2011)

**Research design:** Several one-group pre-test/post-test studies

**Date:** 2007–10

**Age range:** Y3–7

**Type of children:** Looked-after

**Ns of experimental groups:** See below

**Length of intervention in weeks:** 26

**Reading test:** Neale, 1997 edition

**Pre- and post-test average standardised scores and s.d.'s:** Not stated

**Average gains in standardised score points (s.d.'s not stated) and effect sizes calculated using the s.d. of the test (15.0):**

Age group	N	Year	ave. gain	effect size
Y3–4	316	2007	4.4	0.29
		2008	4.4	0.29
Y5–6	449	2007	2.5	0.17
		2008	3.5	0.23
Y7–8	38	2010	3.0	0.20

**Ratio gains:** n/a

**Statistical significances:** Y3–4 and Y5–6 stated by authors to be significant; Y7–8 not stated and could not be calculated

**Starting and ending levels and progress:** In the absence of pre- and post-test scores it is not possible to characterise the starting and ending levels. However, the effect sizes all show modest gains, which were useful for these children.

## Letterbox Club

### (2) Northern Ireland

**Main reference:** Winter *et al.* (2011)

**Research design:** One-group pre-test/post-test study

**Date:** 2009–10

**Age range:** P3–7 (Y2–6)

**Type of children:** Looked-after

**N of experimental group:** 268

**Length of intervention in weeks:** 26

**Reading test:** Neale, 1997 edition

**Pre- and post-test average standardised scores and s.d's, average gains in standardised score points (s.d's not stated), effect sizes calculated (by GB) using the s.d's of the test (15.0), and statistical significances as stated by authors:**

	pre		post		gain	effect
	ave.	(s.d.)	ave.	(s.d.)	ave.	size
accuracy	89.5	(13.9)	93.1	(15.6)	3.6	0.24
comprehension	88.0	(14.2)	91.5	(15.9)	3.5	0.23

**Ratio gains:** n/a

**Statistical significances:**  $p < 0.0005$  in both cases

**Starting and ending levels and progress:** At the start these children were on average about two-thirds of an s.d. below the national norm. They made modest progress, and by the end were beginning to catch up, but would need ongoing support.

## 4.5 Children with dyslexia/SpLD

It is likely that many of the schemes for mainstream children listed in **chapter 3** where the participants are categorised in the Appendix to Part 1 as 'SEN' or 'low attainment' would include some children with dyslexia-SpLD. In this section, however, I consider schemes whose providers say they are specifically for children with dyslexia-SpLD, or where the participants are described as having it. By taking this stance I deliberately sidestep problems of defining dyslexia-SpLD – for those see Rice with Brooks (2004), and for the latest more-or-less agreed British definition see Rose (2009) and Singleton (2009) – and of estimating its prevalence (see Brooks, 2000: 66; Rice with Brooks, 2004: 20). For a particularly clear view on how to define dyslexia and distinguish it from poor reading comprehension see Snowling and Hulme (2011).

In the literature on improving the literacy of children with dyslexia-SpLD, the vast majority of reports are case studies, and most studies of groups have very small samples, making quantitatively-based generalisation from them impossible at present. Accessing the many thousands of individual files in the records of specialist schools and organisations in order to uncover evidence of effectiveness would be a very worthwhile research project; an analogy is the painstaking work analysing thousands of patient records which led to the first reliable evidence that taking a low-dose aspirin daily reduces the risk of heart disease. Here, therefore, I discuss the limited number of studies with large or even modest sample sizes.

### 4.5.1 Specialist dyslexia teaching

Hornsby and Miles (1980) investigated the impact of specialist dyslexia teaching methods in three different settings: a hospital clinic, a university teaching unit, and a private teaching centre. The teaching methods used in the three settings were not identical, but all were systematic, multi-sensory, phonics-based programmes, delivered by qualified dyslexia teachers. The results of 107 dyslexic children were analysed. Their average age at the start of teaching was 10:10, and they received the specialist teaching for about 20 months; thus for many of these children it spanned their transition to secondary school age. They averaged 28 months' gain in reading age and 28 months' gain in spelling age, giving modest ratio gains of 1.4 for both reading and spelling; the gains were statistically significant.

### 4.5.2 East Court School

Thomson (2003) reported on a study of 252 children who had attended East Court School during the period 1983–2000. East Court is an independent specialist school for dyslexic pupils in Ramsgate, which opened in 1983. All the children had been diagnosed by educational psychologists as having dyslexia, and most displayed significant deficits in phonological skills, verbal memory and processing speed. Their average c.a. at the start of teaching was 10:2. On average the children spent two and a half years at the school, which aimed to return them to mainstream education, usually between 11 and 13 years of age. Thus again for many of these children their time at the school spanned their transition to secondary school age. The teaching was similar to that reported by Hornsby and Miles (1980). The children's ratio gains were modest: 1.5 and 2.0 for reading accuracy on two different tests (the lower figure was because the ceiling on the test was 12:10, hence pupils scoring at ceiling would not have their performance reflected in the score), 1.3 for reading comprehension, and 1.6 for spelling. However, these rates of progress were considerably better than they had achieved previously.

Although these studies are somewhat dated, especially the first, they both seem to indicate the benefit of a multi-sensory approach, including systematic phonics instruction.

### 4.5.3 Phono-Graphix®

For details of the scheme, see [section 3.14](#).

**Main reference:** <http://www.readamerica.net> – accessed 14/8/02

**Research design:** One-group pre-test/post-test study

**Date:** 1999–2000

**Age range:** Y4

**Type of children:** SEN (children with dyslexia)

**N of experimental group:** 12 in one independent specialist school in Surrey for children with dyslexia

**Length of intervention in weeks:** 26

**Reading test:** Macmillan Graded Word Reading

**Pre- and post-test average r.a's in years and months, gain in reading accuracy in months of r.a. (s.d's not stated), and ratio gain (RG):**

Pre	Post	Gain	RG
6:4	8:7	27	4.5

**Effect size:** n/a

**Statistical significance:** Was not stated and could not be calculated

**Starting and ending levels and progress:** At pre-test these Y4 pupils were not yet functionally literate. They made remarkable progress, and by post-test their average score was in the semi-literate range. They would need further specialist support.

## 4.5.4 Partnership for Literacy

### Scheme

Partnership for Literacy (P4L) is a whole-school initiative which involves parents as well as teachers and pupils. Dyslexia Action (DA) enters into a partnership with each participating school which lasts one school year. This consists of an apprenticeship phase in which training is given, and then implementation for two terms. In the apprenticeship phase, participants are trained in awareness of dyslexia, identification of pupils with literacy difficulties, and the use of both screening materials and the specialised teaching materials for use with children identified as struggling with literacy. These materials consist of 'Active Literacy Kits' (ALK) and 'Units of Sound' (UofS), both devised by DA staff and consultants. The ALKs cover basic sound-to-letter correspondences through to fluent reading and spelling of consonant-vowel-consonant words (e.g. cat, fat, mat), and are the precursors to, and link directly into, the UofS programme. UofS is a structured, cumulative and multi-sensory computer-based programme that has been developed to teach reading and spelling. It combines the benefits of independent work on a computer with guidance from a teacher or TA. It is intended to build reading accuracy, vocabulary, spelling, sentence writing skills, automaticity, listening skills, memory, visual skills and comprehension. DA provides ongoing consultancy to participating schools. P4L is designed for students from age seven to adults. Up to 2010 it had been used only with primary schools, but there were then plans to extend it to secondary schools.

### Evaluation

Between 2005 and 2009 DA worked with 41 primary schools with a total pupil population of more than 2,000. Within these totals, according to a DA technical report (Rack, 2011), in 2008–09 ten schools provided data on 147 children who had received the full P4L intervention, with pre- and post-tests carried out at a suitable interval (eight months on average). The results showed substantial benefits for both reading accuracy and spelling.

### References

Various reports at <http://www.dyslexiaaction.org.uk/partnership-for-literacy2> including, and especially, Rack (2011)

### Contact

Dyslexia Action  
Park House  
Wick Road  
Egham  
Surrey TW20 0HH  
T: 01784 222300

[www.dyslexiaaction.org.uk](http://www.dyslexiaaction.org.uk)

## Partnership for Literacy

**Main reference:** Rack (2011)

**Research design:** One-group pre-test/post-test study

**Date:** 2008–09

**Age range:** Y2–5

**Type of children:** Identified as having dyslexia

**N of experimental group:** 147 in ten schools in several LAs

**Length of intervention in weeks:** 20 ('two school terms')

**Reading and spelling tests:** WRAT4

**Pre- and post-test average standardised scores and s.d.'s, gains (s.d.'s not stated) and effect sizes calculated using the s.d. of the tests (15.0):**

	pre ave.	(s.d.)	post ave.	(s.d.)	gain ave.	effect size
reading accuracy	82.5	(9.6)	89.9	(9.5)	7.4	0.49
spelling	84.4	(10.2)	89.9	(10.8)	5.5	0.37

**Ratio gain:** n/a

**Statistical significance:**  $p < 0.001$  in both cases

**Starting and ending levels and progress:** Both starting levels were just more than one s.d. below the mean, and therefore below the sixteenth percentile. By the end useful progress had been made in both skills, and the ending levels were about two-thirds of an s.d. below the mean.

## 4.5.5 No to Failure

### Scheme

In 2007 a group of specialist dyslexia organisations (British Dyslexia Association, Dyslexia Action, PATOSS (the Professional Association of Teachers of Students with Specific Learning Difficulties) and Xtraordinary People) received funding from the DCSF to run a project based on 'Specialist Teaching':

A Specialist Teacher is trained to use a toolkit of skills based on a thorough understanding of the structure of language. He or she has been trained to understand the theory of literacy learning and the deficits which may underlie literacy difficulties, including the phonological deficit commonly associated with dyslexia-SpLD.

He or she has detailed understanding of the role phonological awareness and phonemic decoding have in learning to read and spell, knows the phonic structure 'inside out' and has in-depth knowledge of speech and language skills, which, as spoken language, underpin written language skills.

Specialist Teaching is much broader than teaching of reading. It aims to improve not only literacy, including reading, writing, and spelling, but also organisation, concentration and learning, so that the pupil is able to access the curriculum and, in the process, become an independent learner. It is always ... multisensory, structured, cumulative, and individually tailored not only to a learner's needs but also his/her interests.

(The Dyslexia-SpLD Trust, 2009: 26)

The scheme was trialled in a number of 'Trailblazer' primary and secondary schools in Calderdale, Cornwall and Southwark in 2007–08, with children in Y3 and Y7 being targeted.

### Evaluation

The trial was originally set up without a control or comparison group. However, there were not enough teachers trained to deliver Specialist Teaching to all the children initially identified as at risk of dyslexia, so those thought to be most in need were selected to receive it. Then in the spring of 2007 a decision was made to treat those children who had been identified as needing the intervention but were not receiving it as a comparison group. In the project report extensive and detailed statistical comparisons between the experimental and comparison groups so constituted are presented, but the authors of the relevant chapter concede that the method of allocation was far from ideal, and that the comparisons should be treated with caution.

For the purposes of this review, I decided against using any of the comparison group data, because that group was not properly matched to the experimental group (and the research design is therefore described below as 'Two one-group pre-test/post-test studies' – counting Y3 and Y7 as separate studies). Despite this, analysis showed that a few results from the experimental groups alone were worth reporting. These showed modest gains for Y3 pupils in reading accuracy and comprehension, and for Y7 pupils in spelling, but a useful gain for Y3 pupils in spelling.

### Reference

The Dyslexia-SpLD Trust (2009)

### Contact

Margaret Rooms Director of Educational Development,  
Dyslexia Action, Park House, Wick Road, Egham, Surrey TW20 0HH  
Telephone 01784 222300

[www.dyslexiaaction.org.uk/](http://www.dyslexiaaction.org.uk/)

[www.thedyslexia-spldtrust.org.uk/no-to-failureproject/](http://www.thedyslexia-spldtrust.org.uk/no-to-failureproject/)

## No to Failure

**Main reference:** The Dyslexia-SpLD Trust (2009)

**Research design:** Two one-group pre-test/post-test studies

**Date:** 2007–08

**Age range:** Y3, Y7

**Type of children:** At risk of dyslexia

**Ns of experimental groups:** (Y3) 55; (Y7) 37

**Length of intervention in weeks:** 20 (4.6 months used in calculating RGs)

**Tests:** (Reading) New Macmillan; (spelling) Vernon

**Pre- and post-test average r.a's and s.d's in years and months, gains in months of r.a. (s.d's not stated), and ratio gains:**

Y3 (N=55)	pre		post		gain	RG
	ave.	(s.d.)	ave.	(s.d.)	ave.	
reading accuracy	7:5	(0:8)	8:0	(0:10)	7.2	1.6
comprehension	7:5	(0:10)	8:2	(0:10)	8.6	1.9

**Effect sizes:** n/a

**Pre- and post-test average standardised scores and s.d's for spelling, gains in standardised score points (s.d's not stated), and effect sizes calculated as gains divided by the s.d. of the test (15.0):**

year group	N	pre		post		gain	effect size
		ave.	(s.d.)	ave.	(s.d.)	ave.	
Y3	55	74.3	(6.9)	84.4	(12.8)	10.1	0.68
Y7	37	78.7	(9.4)	84.7	(12.8)	6.0	0.40

**Ratio gains:** n/a

**Statistical significances:**  $p < 0.001$  in all cases

**Starting and ending levels and progress:** The Y3 pupils were on average seven months behind in reading at the beginning, and by the end had caught up by 2.6 months in accuracy and 4.0 months in comprehension. The gains were modest, but presumably useful for this group.

Both year groups were well over one s.d. below the norm in spelling at the beginning, which is equivalent to several years. By the end both year groups had almost reached one s.d. below the norm, with Y3 having made better progress than Y7, but both groups would need further strong support.

## 4.5.6 Wordshark 4

### Scheme

Wordshark 4 is a computerised teaching resource for improving spelling, reading and motivation, and is designed for pupils in KS1–3. It uses more than 55 games to reinforce reading and spelling. The program uses both analytical and synthetic phonics, with one section completely set out in the order of *Letters and Sounds*.

### Evaluation

Veronica Shoebottom, an experienced learning support teacher holding dyslexia qualifications (AMBDA), carried out a small-scale quasi-experiment in five primary schools (N=26 in both groups) in Birmingham in 2010. The experimental group made a useful gain in reading comprehension, while the comparison group made little more than standard progress.

### Reference

Unpublished data supplied by Veronica Shoebottom

### Contact

Veronica Shoebottom  
[ronnie@learningsolutions4u.com](mailto:ronnie@learningsolutions4u.com)

#### Wordshark 4

**Main reference:** Unpublished data supplied by Veronica Shoebottom

**Research design:** Matched-groups two-group quasi-experiment

**Date:** 2010

**Age range:** 6:1–10:9 at pre-test

**Type of children:** Dyslexia-SpLD

**N of experimental group:** 26 in five primary schools in Birmingham

**N of comparison group:** 26 in same schools

**Equivalence of groups:** 'Care was taken to liaise with the SENCOs in order to match the pupils evenly'

**Length of intervention in weeks:** 15

**Reading test:** Salford Sentence Reading

**Pre- and post-test average r.a's, gains and s.d's:** not stated

**Ratio gains as stated by author:**

experimental group	2.9
comparison group	1.4

**Effect sizes:** n/a

**Statistical significances:** Not stated and could not be calculated

**Starting and ending levels and progress:** In the absence of pre- and post-test scores it is not possible to characterise the starting and ending levels. However, the experimental group made a useful gain in comprehension, about double the modest gain of the comparison group.

## 4.6 Children with a range of specific educational needs

### 4.6.1 Personalised Learning for Reading/Writing

#### Scheme

Working in partnership with colleagues from the CfBT educational charity, the Language and Learning Support Service (LLSS), part of Children's Services in East Sussex, ran a Wave 3/Personalised Learning literacy project with Y3 pupils in 45 schools in 2006.

The children were identified as working at W/L1 in reading. Both the teacher and TAs worked with selected children on a one-to-one basis for 15 minutes a day over a period of three months on a 'specific small steps' programme of reading support.

All the teaching sessions were driven by a detailed analysis of each pupil's literacy abilities, and involved ongoing assessment. This enabled informed decisions to be made about the specific small steps focus of each session. The teaching was highly structured, specifically targeted and interactive. Books were integral to the programme, with new books specifically chosen for each pupil with particular regard to the child's interests and level.

Each teacher and TA had intensive training over two full and two half days. This included diagnostic assessment techniques, tracking strategies, and the methods underpinning the sessions. Once the projects had started, support was made available from the LLSS via e-mail and through visits, during which the teaching sessions were observed and feedback given.

#### Evaluation

The LLSS team collected its own evaluation data, which showed substantial gains from two groups of children.

#### Reference

Unpublished data supplied by Linda Perry and Carole Price

#### Contact

Carole Price/Linda Perry  
LLSS  
River House  
Bell Lane  
Uckfield TN22 1AE  
T: 01825 764177  
F: 01825 768667  
[carole.price@eastsussex.gov.uk](mailto:carole.price@eastsussex.gov.uk)  
[linda.perry@eastsussex.gov.uk](mailto:linda.perry@eastsussex.gov.uk)

## Personalised Learning for Reading/Writing

**Main reference:** Unpublished data supplied by Linda Perry and Carole Price

**Research design:** Two one-group pre-test/post-test studies

**Date:** January–March 2006, January–March 2007

**Age range:** (1) Y3; (2) Y1

**Type of children:** Many had complex needs, such as ADHD, autism, dyslexia, or speech and language difficulties. All were on SEN register, with very low literacy scores. A considerable number were also unsure of many of the basic aspects of literacy, e.g. letter knowledge, concepts of print, etc. Criterion for inclusion in project was that they were working towards level 1 in reading.

**N of experimental group:** (1) 69 in 45 schools; (2) 23 in 13 schools

**Length of intervention in weeks:** 12

**Reading test:** Reading Progress Test (Hodder and Stoughton)

**Pre- and post-test average r.a's and s.d's (in years and months), gains in reading comprehension in months of r.a. (s.d's not stated), and RGs:**

Cohort	Pre		Post		Gain	RG
	average	(s.d.)	average	(s.d.)		
2006	5:11	(0:7)	6:10	(0:9)	11	3.7
2007	5:5	(0:7)	6:5	(0:8)	12	4.0

**Effect sizes:** n/a

**Statistical significances:**  $p < 0.001$  in both cases

**Starting and ending levels and progress:** Neither group of children were functionally literate at either pre- or post-test. The Y3 group started about 18 months behind in r.a., the Y1 group several months behind. Both groups made substantial gains.

## 4.7 The Reading Intervention team's search for what might work for children who struggle the most

As pointed out in section 3.16, two series of experiments can be analysed as having arisen from the Cumbria study of the late 1980s/early 1990s, one maintaining and monitoring the Reading Intervention programme as a mainstream initiative, the other seeking strategies that might prove effective for children with specific difficulties and/or very low attainment, or in preventing difficulties arising in the first place. The first of these series is analysed in **section 3.16**, the other here. Within the latter series I deal first with studies on children with specific difficulties, then with studies on children with very low attainment, and finally with the search for what might prevent children at risk of failure developing problems in the first place.

Two key articles from this team are Snowling and Hulme (2011) and Duff and Clarke (2011). Both provide theoretical justification for distinguishing between (at least) children with dyslexic difficulties, and those whose problems are specific to comprehension. Dyslexic difficulties are mainly to do with word recognition, are mediated by inadequate phonological/phonemic awareness, and are best tackled with phonological/phonics programmes within a broad literacy approach. Comprehension problems relate to text level and two effective approaches to them are **Inference Training** and **Reciprocal Teaching** – see their entries in chapter 3. A few children have both problems, and need a targeted blend of the best approaches for each.

### 4.7.1 Children with specific difficulties: dyslexia or moderate learning difficulties

The team's major study on children with specific difficulties was a secondary analysis of data from Hatcher's (2000) study which monitored the continued use of the Reading Intervention Programme in Cumbria. (For main details on this study see **section 3.16** and the entry in the Appendix to Part 1.) That study contained a subset of 73 statemented children, of whom 57 were studied in further detail; 29 had been diagnosed as having dyslexia, and 28 had moderate learning difficulties. For each of these groups a comparison group of teacher-referred children was constituted. The comparison groups made as much progress as the experimental groups in reading, and substantially more in spelling.

The team has ongoing research on this area. Their webpage

<http://www.york.ac.uk/psychology/research/groups/crl/research/wellcome/>

(accessed 21/9/12) announced the Wellcome Language and Reading project, which 'will trace the development of three groups of children from when they are three years old to seven years old:

- Children from a family where there is a history of dyslexia
- Children who have pre-school speech and/or language difficulties
- Children who are developing typically.

At six years of age, 60 children from high-risk groups who are showing reading delay one year after beginning school will be selected to receive a specially designed intervention to promote language and literacy skills.'

The team conducted an RCT of a combined reading and language intervention, delivered to 56 six-year-olds from the sample, screened as at risk of dyslexia. Children who received nine weeks of daily intervention made greater progress than waiting controls on phoneme awareness, word reading, phonetic spelling, and expressive vocabulary. A longer course of intervention (18 versus nine weeks) produced greater progress in word reading, phonetic spelling, and reading comprehension (Duff *et al.*, submitted).

## The Reading Intervention Programme

For children with dyslexia or moderate learning difficulties (subset of those in Hatcher (2000) – see section 3.16 and the Appendix to Part 1)

**Main reference:** Hatcher (2000)

**Research design:** Matched-groups four-group quasi-experiment

**Date:** 1994–98

**Age range:** Y2–10; data not given separately by year groups

**Type of children in experimental groups:** SEN – all statemented children with dyslexia (DYS) or moderate learning difficulties (MLD)

### Nature and Ns of experimental and comparison groups:

	<b>N</b>
(1) Children with DYS	29
(2) Comparison group for DYS (Comp 1)	29
(3) MLD (IQ in range 55–75)	28
(4) Comparison group for MLD (Comp 2)	27

**Equivalence of groups:** Each experimental child was matched (from a pool of 351) with a teacher-referred child with an equivalent score on four pooled literacy assessments and of same gender. Also of similar age where possible

**Length of intervention in weeks:** 12

**Tests used:** (reading) Burt, 1974 revision; (spelling) Schonell

**Average pre- and post-test r.a's/s.a's in years and decimal years and gains in months of r.a./s.a. (s.d's not stated) for experimental group (not stated for comparison group), RGs for both groups as stated by author, and effect sizes calculated from raw score data in article using pooled post-test s.d's:**

Group	N		Word reading accuracy	Spelling
			r.a. (yrs & decimal yrs)	s.a. (yrs & decimal yrs)
DYS	29	Pre	6.6	6.8
		Post	7.4	7.4
		Gain	0.8	0.6
		RG	2.9	2.1
Comps 1	29	RG	3.0	3.2
		Effect size	-0.01	-0.34
MLD	28	Pre	6.1	6.2
		Post	6.5	6.8
		Gain	0.4	0.6
		RG	1.4	2.4
Comps 2	27	RG	1.7	3.0
		Effect size	-0.14	-0.22

**Statistical significances as stated by author (some based on data not presented here):** In reading, DYS made a significantly greater gain than MLD, but neither experimental group differed significantly from its comparison group. In spelling, DYS and MLD did not differ, and MLD did not differ from its comparison group, but DYS made significantly less gain than its comparison group.

**Starting and ending levels and progress:** Absence of pre- and post-test scores for the comparison groups means their starting and ending levels cannot be characterised. Given the ages of these children, the pre-test average r.a's and s.a's of the experimental groups mean they were not only not yet functionally literate but many years behind. Most gains were useful or substantial, but the MLD group and their comparison group made only modest progress in reading. By post-test the DYS group (but not the MLD group) had moved into the semi-literate range for both reading and spelling. However, the RGs show, and the effect sizes and statistical significances confirm, that the comparison groups made as much progress as the experimental groups in reading, and substantially more in spelling.

## 4.7.2 Children with very low attainment

Duff and Clarke (2011: 5) concluded their analysis of interventions for children with dyslexic difficulties as follows:

In summary, a good understanding has been reached regarding how to ameliorate word-level weaknesses in children with dyslexic difficulties. Such interventions should entail training in phoneme awareness, letter knowledge, explicit and systematic instruction in phonics, and the application of these skills to the tasks of reading and writing. Notwithstanding this, there is a growing appreciation that even interventions that honour best practice are not effective for all children... Ongoing work is needed in order to understand the profiles of non-responders, and how interventions can be adapted to suit their needs.

The Reading Intervention team identified this need several years before this, and have been addressing it. Their first study on children with very low attainment (Hatcher *et al.*, 2006) was an RCT conducted on a modified version of the Reading Intervention programme delivered by TAs to small groups of Y1 children selected as being in the bottom 8% of the population for reading. Half received the programme for 20 weeks, the other half for ten weeks (and acted as a control group during the first ten weeks). The 20-week group made better progress than the control group in the first ten weeks, but after 20 weeks the control group had caught up. Both groups had maintained their gains on average when re-tested 11 months later. However, 21 of the total of 77 children had not made progress; indeed, their standardised scores had gone down. Detailed analyses showed these were more likely to be children with very low scores at the outset and/or receiving free school meals.

Next, 12 eight-year-old children with severe and persisting reading difficulties who had taken part in the Hatcher *et al.* (2006) study but had failed to make progress were followed up by Duff *et al.* (2008). They devised a scheme they called 'Reading with Vocabulary Intervention' (REVI) which fused Reading Intervention and the 'robust vocabulary instruction method' devised by Beck *et al.* (2002). Duff *et al.* mounted a nine-week intervention incorporating reading, phonological and vocabulary training in the summer term of 2006, when the children were in Y3. They had made almost no progress over the previous six months of regular classroom instruction. Although the study is too small to analyse in full, in the nine weeks of the intervention the children made statistically significant gains in reading, phonological awareness and language skills, and these were maintained six months later. But they were still achieving well below average in reading and would need ongoing support.

## The Reading Intervention Programme for children in the bottom 8% nationally

**Main reference:** Hatcher *et al.* (2006)

**Research design:** RCT

**Date:** 2003–04

**Age range:** Y1

**Type of children:** Six weakest readers in each school

**N of experimental group:** 39 in 13 schools

**N of control group:** 38 in same schools

**Equivalence of groups:** Randomly allocated

**Length of intervention in weeks:** Ten (control group received intervention in following ten weeks)

**Reading tests:** Early Word Recognition Test (Hatcher *et al.*, 1994), BASWRT

**Pre- and post-test average raw scores (EWR)/standardised scores (BASWRT) and s.d's, gains (s.d's not stated) and effect sizes calculated as the difference in gains divided by the pooled post-test s.d.:**

Test	group	pre		post		gain ave.	effect size
		ave.	(s.d.)	ave.	(s.d.)		
EWR	exps	2.79	(3.47)	12.49	(7.40)	9.70	0.48
	conts	5.00	(5.41)	11.11	(7.82)	6.11	
BASWRT	exps	79.49	(4.32)	84.08	(7.91)	4.59	0.43
	conts	82.11	(6.35)	82.97	(9.79)	0.86	

**Ratio gains:** n/a

**Statistical significances as stated by authors:** EWR  $p < 0.001$ ; BASWRT  $p = 0.016$

**Starting and ending levels and progress:** Raw scores on the EWR do not permit characterisation of starting and ending levels, but on the BASWRT both groups were distinctly more than one s.d. below the national norm. Both effect sizes show that the experimental group had made much more progress than the control group, although at the end both groups were still well below the national norm on the BASWRT.

**Follow-up:** In the ten weeks following the RCT, both groups received the intervention. During this period the control group made so much progress that they caught up with the experimental group on both measures. At a further follow-up 11 months later, both groups had maintained their gains. Five years after the study, when the children were in Y6, Snowling and Hulme (2009) traced 54 of them. These children had maintained their gains, and on average were reading within the normal range.

### 4.7.3 Children with reading comprehension difficulties: Reading for Meaning (README) project

As Duff and Clarke (2011), cited above, pointed out, this group of children are mostly distinct from those with word recognition problems (dyslexic difficulties). This group are mainly characterised by a large discrepancy between adequate to good word recognition and poor text comprehension. (As also pointed out above, a very small proportion of children will have both problems, that is, both poor word recognition and poor comprehension.)

#### Reading for Meaning (README) project

##### Scheme

In the Reading for Meaning project (Clarke *et al.*, 2010), members of the Reading Intervention team turned their attention to children with reading comprehension difficulties – but the Reading Intervention Programme as such was not used. Rather, some of its elements were used in conjunction with strategies from elsewhere to create three experimental conditions:

1. Oral Language. This comprised four components: vocabulary, reciprocal teaching with spoken language, figurative language and spoken narrative. All teaching in this programme involved working with spoken language. In the first component, a typical session began with a 'word of the day', which was taught using primarily the multiple-context learning approach (Beck *et al.*, 2002). This approach emphasizes the dialogue between children and tutor, and encourages children to use new words in relevant and familiar contexts. Sixty new words were taught (one per session). In the second component, children listened to a passage and completed an activity using the four key reciprocal-teaching skills in the spoken-language domain. In the third component, children explored figurative language, including idioms, riddles, jokes, similes and metaphors. In the fourth component, children completed spoken narrative activities (largely paralleling those in the Text Comprehension programme) and applied their learning to record their spoken stories onto CDs.
2. Text Comprehension. This also comprised four components: metacognitive strategies, reciprocal teaching with text, inferring from text, and written narrative. All teaching in this programme involved working with written texts. In the first component, children learned and used five metacognitive strategies (reread, look-back, visualise, think aloud, and self-explanation) and applied them to answering a set of comprehension questions. In the second component, children completed activities to promote reading comprehension using the four key skills of the reciprocal-teaching approach. In the third component, children learned about different inference types, from basic cohesive inferences (e.g. resolving pronouns) to more sophisticated inferences (e.g. bridging, elaborative and evaluative). In the final component, children explored aspects of written narrative (e.g. narrative structure, sequencing, character profiling) and applied this knowledge to produce their own written narratives.
3. Combined, using all eight of the strategies listed above.

The interventions were delivered by TAs, who received 3.5 days of intensive training and fortnightly refresher training during the intervention phase. Each intervention had the same basic structure, and consisted of three 30-minute sessions per week (two in pairs, one individually) for 20 weeks (30 hours of intervention per child).

##### Evaluation

A total of 160 children in 20 schools were randomly assigned to one of these conditions or to a waiting-list control group (five dropped out during the experiment, so that the total N in the analysis below is 155). They had been identified through a rigorous screening process as having not only poor reading comprehension, but on average a substantial discrepancy between that and adequate to good word recognition. Two comprehension tests (and several other measures) were administered at pre- and post-test, and at a follow-up 11 months after the intervention ended. The results on one of the comprehension tests showed that all three experimental groups had made better progress than the control group, and maintained their advantage at follow-up – indeed, the Oral Language group increased it. On the other comprehension test, the results at post-test showed no significant differences, but at follow-up the Oral Language group was significantly better than the control group. Using these results and those from other measures, the research team concluded

that the Oral Language programme had outperformed the others, and that the major reason for this was that vocabulary development had had more impact on reading comprehension than text comprehension practice (gains in vocabulary mediated gains in reading comprehension, completely so for the combined group) – not exactly the predicted outcome.

## References

Clarke *et al.* (2010)

[www.readingformeaning.co.uk](http://www.readingformeaning.co.uk)

## Reading for Meaning

**Main reference:** Clarke *et al.* (2010)

**Research design:** Four-group RCT

**Date:** 2007

**Age range:** Y4

**Type of children:** Having difficulties with reading comprehension; on average, pre-test standardised comprehension score on the Neale was one s.d. below reading fluency as measured by Test of Word Reading Efficiency

### Nature of experimental treatments:

**Oral Language:** vocabulary, reciprocal teaching with spoken language, figurative language, and spoken narrative

**Text Comprehension:** metacognitive strategies, reciprocal teaching with text, inferencing from text, and written narrative

**Combined:** all eight components just listed

**Ns of experimental and control groups:** See below

**Equivalence of groups:** Randomly allocated; no statistically significant differences between groups on any measure at pre-test

**Length of intervention in weeks:** 20

**Reading comprehension tests:** Wechsler Individual Achievement Test, second edition; Neale second revised British edition

**Pre- and post-test average standardised scores (WIAT)/raw scores (Neale) and s.d's, gains in standardised/raw score points (s.d's not stated), effect sizes stated by authors as calculated via regression analyses using differences in gains between each experimental group and the control group, and statistical significances as stated by authors:**

Test	Group	N	Pre ave.	(s.d.)	Post ave.	(s.d.)	Gain ave.	Effect size	Stat. sig.
WIAT	Oral	38	95.43	(7.38)	98.46	(7.05)	3.03	0.69	p<0.01
	Text	40	96.38	(6.98)	98.66	(7.92)	2.28	0.59	p<0.05
	Comb.	38	94.08	(8.34)	99.23	(7.66)	5.15	0.99	p<0.01
	Cont.	39	97.77	(6.06)	95.79	(7.55)	-1.98		
Neale	Oral	38	16.13	(4.70)	24.00	(5.51)	7.87	0.13	ns
	Text	40	16.15	(4.89)	24.46	(5.86)	8.31	0.22	ns
	Comb.	38	16.15	(4.12)	24.54	(5.36)	8.39	0.24	ns
	Cont.	39	16.55	(5.37)	23.79	(5.79)	7.24		

**Ratio gains:** n/a

**Starting and ending levels and progress:** Given that the maximum raw score on the Neale is 44, the pre-test scores on that test show these children were all well behind, even though the pre-test averages on the WIAT show all four groups were not far below the national norm on that test. All four groups progressed to just more than half marks on the Neale, hence the small and non-significant effect sizes on that test. The medium to large effect sizes on the WIAT owe something to the fact that the control group lost ground on that test, but do show that the three experimental groups benefited – by post-test all three of these groups were very close to the norm.

**Follow-up:** Both tests were re-administered to all four groups in November 2008–January 2009, 11 months after the intervention ended. On the WIAT the text, combined and control groups had all fallen back slightly, but the oral group had made further progress and increased its advantage over controls. The statistical significances of differences between the other experimental groups and the control were much the same as at post-test. On the Neale all four groups had made similar amounts of progress (three to four points of raw score), and the oral group were now significantly better than the control group.

#### 4.7.4 Children with Down's syndrome

In 2005 Goetz *et al.* (2008) studied 15 children with Down's syndrome attending mainstream schools (14 primary, one secondary) who could read at least five words on the EWR test (Hatcher, 1992) but scored 50% or less correct on a non-word reading test. The programme lasted 16 weeks, was delivered by the children's LSAs, who received specific training, and was built on the Reading Intervention Programme and *Jolly Phonics* (Lloyd and Wernham, 1998), with additional speech-based work devised by a speech and language therapist. The children made gains in letter-sound knowledge and word recognition, and the gains were maintained five months afterwards.

Then in 2009 Burgoyne *et al.* (2012) conducted the first RCT with children with Down's syndrome. The intervention was REVI+, an adaptation of the REVI programme previously used by Duff *et al.* (2008) – see above. The 54 children involved were aged between five and ten, and were attending mainstream schools. For the first 20 weeks, 28 children received REVI+, while 26 did not; in a further 20 weeks, both groups did. In phase 1, the experimental group made significantly more progress than the control group in reading, but not in spelling; in phase 2 the two groups made similar progress in both skills.

#### Reference

Burgoyne *et al.* (2012)

#### Contact

<http://www.down-syndrome.org/reviews/2128/?page=1>

<http://www.york.ac.uk/psychology/research/groups/crl/research/revi/>

## REVI + (Reading Intervention and Vocabulary Instruction plus) for children with Down's syndrome

**Main reference:** Burgoyne *et al.* (2012)

**Research design:** RCT

**Date:** 2009

**Age range:** Y1–5

**Type of children:** Down's syndrome

**N of experimental group:** 28

**N of control group:** 26

**Equivalence of groups:** Randomly allocated; no statistically significant differences on any measure at pre-test

**Length of intervention in weeks:** 20

**Tests:** (Reading) Early Word Recognition, plus some words from Single-word Reading test for children who could manage this, both from York Assessment of Reading battery (Hulme *et al.*, 2009) – maximum score 79; (Spelling) ten words presented as pictures to be named and spelt, scored for each phoneme represented – maximum score 92 (see Bowyer-Crane *et al.*, 2008, below)

**Pre- and post-test average raw scores and s.d's, average gains (s.d's not stated), effect sizes calculated (by GB) as difference in gains divided by pooled post-test s.d., and statistical significances as stated by authors:**

		pre ave.	(s.d.)	post ave.	(s.d.)	gain ave.	effect size	stat sig
reading	exp	5.86	(10.41)	10.50	(12.01)	4.64	0.21	p=0.002
	cont	6.88	(12.43)	8.92	(13.59)	2.04		
spelling	exp	4.89	(17.87)	11.00	(21.84)	6.11	0.06	ns
	cont	12.35	(23.85)	17.00	(26.98)	4.65		

**Ratio gains:** n/a

**Starting and ending levels and progress:** As might be expected, both groups' pre- and post-test averages and gains were low percentages of the maximum scores. However, the experimental group did make significantly more progress than the control group in reading, though not in spelling.

**Follow-up:** During the 20 weeks following the RCT, both groups received the intervention, and the control group made gains similar to those of the experimental group in phase 1. At the end of phase 2, the experimental group's gains were still greater than the control group's, but not significantly so on either test.

## 4.8 What might prevent literacy difficulties arising in the first place?

In the first Reading Intervention team study in this strand, Hatcher *et al.* (2004) investigated whether adding various extra phonic activities to the Reading Intervention Programme would benefit children relative to that programme alone. The teaching began when the children were aged four and a half on average, and lasted for five terms. The children were assessed with a battery of tests at the outset and at three points during the experiment. The classes were allocated to one of four groups matched on pre-test scores, five classes per group, and the groups were then randomly allocated to one of three interventions or to the control group, who received 'only' a suitably age-adapted version of the Reading Intervention Programme. Data at the four time points were available for 410 children. Hatcher *et al.* reported some analyses for the whole of this sample, but mainly on two retrospectively defined sub-samples: normally developing children (N=273), and children at risk of reading failure (N=137). The first of these sub-samples represents the use of the Reading Intervention Programme as an initial scheme, so it is not analysed here. The latter sub-sample was defined as 'the poorest third of children based upon the[ir] average [pre-test] scores' (p.340). The authors concluded (p.338):

There were no selective effects of the different experimental teaching programmes for normally developing children. However, for those children identified as being at risk of reading failure, training in phoneme skills resulted in selective gains in phoneme awareness and in reading skills... A reading programme that contains a highly structured phonic component is sufficient for most 4.5-year-old children to master the alphabetic principle and to learn to read effectively, without additional explicit phonological training. In contrast, for young children at risk of reading delay, additional training in phoneme awareness and linking phonemes with letters is beneficial.

Which is helpful – especially because it suggests that (1) children at risk of reading failure can be identified by appropriate testing at age four and a half, and (2) extra phonological work with this group (the bottom third) may prevent some failure. However, Hatcher *et al.* also pointed out that this extra work did not produce gains for all the at-risk children in the relevant groups: even with this extra input, about a third of the children in these groups did not benefit. Thus, as many teachers have suspected, there is a small proportion of children who require very intensive and specialised help if they are to progress in reading – several such groups have featured already in this chapter.

Next, Bowyer-Crane *et al.* (2008) reported on a programme called Phonology with Reading, implemented with 71 Reception children. It consisted of training in three elements known to be robust predictors of reading development: letter knowledge, phonemic awareness and reading practice. Direct teaching in sight word reading was also included. In an RCT, Phonology with Reading was compared with an oral language (OL) programme implemented with 75 other Reception children; that programme comprised instruction in vocabulary, comprehension, inference generation and narrative skills. Both programmes were delivered by trained TAs daily for 20 weeks and there were both individual and small-group sessions.

Both the Phonology with Reading intervention and the Oral Language alternative treatment were based on the 'simple view of reading' (Gough and Tunmer, 1986), namely, that phonological skills are fundamental to alphabetic literacy, while aspects of oral language ability beyond phonology provide the foundation for reading comprehension, which depends on the interaction of decoding ability and comprehension of spoken language. Based on the 'simple view', Bishop and Snowling (2004) had developed a model in which the risk of word-level decoding difficulties is associated with phonological deficits, whereas the risk of reading comprehension difficulties is associated with poor oral language skills.

It was predicted that the Phonology with Reading condition would have superior impact on children's decoding competence, and the Oral Language alternative treatment on children's reading comprehension. The Phonology with Reading condition brought about gains in letter-sound knowledge and phoneme awareness, word reading accuracy and phonetic spelling, as well as transferring to nonword reading after five months. A subsequent analysis (Hulme *et al.*, 2012) showed that gains in literacy in this programme were fully mediated by gains in basic 'alphabetic' skills, i.e. letter-sound knowledge and phoneme awareness. In contrast, although the oral language approach led to improved expressive grammar and knowledge of taught

words, it did not, at this early stage, lead to improved reading comprehension. The authors suggested there might be merit in a combined approach.

Fricke *et al.* (2012, in press), went on to modify the Oral Language programme for younger children, and to supplement it for ten weeks with work on letters and phoneme awareness. They carried out an RCT with 179 children with language difficulties and hence at risk of reading problems. At pre-test in March–April 2009 the children were aged on average 4:0 and in nursery school. Over three school terms (one in nursery, 2 in Reception) 89 of them received 30 weeks of an oral language intervention, while the rest followed the normal nursery/Reception curriculum. All the children were tested before the intervention and at its end, and again six months further on (by this point, November–December 2010, they were aged 5:8 on average and in Y1). The intervention group showed significantly better performance on measures of oral language and spoken narrative skills than the control group at post-test and at follow-up. Gains in word-level literacy skills were weaker, though clear improvements were observed on measures of phonological awareness. Importantly, the improvements in oral language skills were related to a strong advantage for the intervention group in reading comprehension at follow-up. Curiously, however, this advantage was not mediated by reading accuracy, on which the groups did not differ. This result is the opposite of one found by Hatcher *et al.* (1994), and will require deeper investigation before it is concluded that improving children's reading accuracy does not help improve comprehension.

If reading difficulties are to be prevented from arising, accurate, early identification of children at risk is essential. The approach implied by the results of Hatcher *et al.* (2004) cited above could be one way of doing this. Another was researched by Snowling *et al.* (2011). They made strategic use of the fact that, following the Rose Report (2006), the increased emphasis on phonics in primary schools in England and the publication of the *Letters and Sounds (L&S)* materials meant that early years teachers were alert to their pupils' progress through the 'Phonic Phases' embodied in *L&S*. Snowling *et al.* investigated the extent to which teachers' judgments of which children were at risk of dyslexic difficulties, based on their assessments of their pupils' progress through the Phases, were reliable, and whether those judgments could be strengthened through the use of other measures.

In December 2008, when the children were in Y1 and their average age was 6:1, Snowling *et al.* identified 73 children who had reached Phonic Phase 2.1 (know six grapheme-phoneme correspondences (GPCs) and can segment and blend simple syllables) but not Phonic Phase 2.2 (know 19 GPCs and some irregular words). Six months later they tested both that group and 73 other children forming a representative comparison group; for each child thought to be at risk, the next child on the register in the same class was chosen. The teachers' judgments over-estimated the prevalence of dyslexic difficulties, but could be strengthened to 92% accuracy by adding two tests: sound isolation (a measure of phonemic awareness), and either rapid automatic naming of colours (a measure of verbal processing speed) or letter knowledge. If administered early in Y1 and added to teachers' judgments, the two tests could help identify almost all children likely to develop problems (and would miss only a few, and mis-identify only a few who would not be likely to). Such a procedure would, I suspect, be much more helpful to teachers and pupils than the phonics test introduced in England in 2012 – which, it was announced late in September, 42% of Y1 pupils had failed.

Accompanied by high-quality teaching, assessment and intervention throughout primary school, this procedure could also hold out the promise of far fewer children making the transition to secondary level with inadequate literacy. This was the aim of the West Dunbartonshire initiative, which has pride of place in the next chapter.

# Chapter five

## Schemes for boosting literacy at primary/secondary transition

### Acknowledgment

This chapter is largely based on a review the JJ Charitable Trust (one of the Sainsbury family trusts) commissioned from me (Brooks, 2010).

### 5.1 Timelines

In May 2012 Nick Clegg announced a £10m fund to be used to boost attainment at primary/secondary transition. The Education Endowment Fund is to administer this and in summer 2012 invited bids for rigorous research on the area, with an insistence on RCT designs (see <http://educationendowmentfoundation.org.uk/projects/literacy-catch-up-projects>). And in September 2012, Nick Clegg announced a further £55m as a 'catch-up premium' to be paid to secondary schools to help pupils who had not achieved Level 4 in reading or maths at the end of KS2.

Also in summer 2012, 2,000 summer camps were run for 65,000 of the most disadvantaged pupils about to transfer from primary to secondary school in England. The cost was estimated to be £50m, and this amount came from the Pupil Premium (see the previous chapter). Though any evaluation data from these camps will come too late for this edition, it is to be hoped that they have more success than those run in 1997 (see below).

### 5.2 The problem

The proportion of children in England achieving below Level 4 in English at KS2 has hovered around 19% for several years – see **Table 1.1** in chapter 1. The literacy demands of secondary education rapidly increase beyond those required at primary level, and pupils who arrive in secondary schools without at least level 4 reading and writing are likely to struggle, severely if their attainment is well below that. Also, the almost universal change from delivery of most of the curriculum and school day by generalist class teachers to mainly subject-centred teaching in discrete lessons and rooms by specialists militates against curriculum continuity and progression in learning.

Ofsted inspections and other reports have consistently identified and praised good practice in curriculum continuity and progression in learning, but equally consistently shown this to be patchy. Ofsted (2002), for example, found that more needed to be done to improve the continuity of teaching, learning and assessment as pupils transferred from primary to secondary school, and Ofsted (2008: 17), citing this, said tersely: 'Little has changed.'

In the particular case of English, Denis Vincent (personal communication, 20 July 2010), who had been carrying out quality assurance visits observing the use of tests with gifted Y6 pupils, said he had noticed a dislocation between primary and secondary schools in terms of talking about and testing the analysis of textual form: this is pervasive at secondary level, but unfamiliar in Y6 even to the brightest pupils. If not made explicit to Y7 pupils, or to children before transition, this would seem likely to present a new obstacle. And although the brightest will soon catch on, others will struggle. And there are undoubtedly new, hidden literacy demands in other subject areas.

The problem will be exacerbated if, as is widely believed, there is a decline in academic attainment at the point of transition – and there does appear to be. McGee *et al.* (2004) cited evidence from New Zealand and around the world confirming this. Further and particularly strong evidence comes from a very large longitudinal study in Quebec. Duchesne *et al.* (2005) studied 1,003 French-Canadian mothers from the

time their children were in kindergarten, aged five, in 1986 until the children were in the first year of high school, aged 13, in 1994. One-seventh (14%) of their children experienced a significant drop in educational attainment at transition.

For England the classic evidence on the decline in attainment at transition comes from the evaluation of the 1997 Summer Schools Programme for children leaving Y6 and about to enter Y7 (Sainsbury *et al.*, 1997, 1998, 1999). This found an improvement in reading scores while children were on the programme but, more tellingly for receiving secondary schools, a drop in the children's results between the KS2 test in the summer term and a statistically equivalent test given at the beginning of the autumn term. There was also a drop in the average score on these tests of a control group of children who did not take part in the Summer Schools, but of the same magnitude, so the Summer Schools didn't even reduce the participants' decline. It is therefore not really surprising that many secondary schools distrust the information they receive on pupils' Y6 attainments (see Rose, 2009: 95), and that many have their new pupils take a cognitive ability test (see Galton *et al.*, 2003: 55, 71) to assist in grouping by ability and/or in target-setting. The Sainsbury *et al.* study was conducted before a range of initiatives on transition occurred, and in virtual isolation from any other aspect of what would now be considered good practice. Even so, Galton *et al.* (2003: 58–59) and Sutherland *et al.* (2010: 11) have found similar evidence.

The problem is further exacerbated if, as in many cities, pupils from any one primary school disperse to a range of secondaries and, correspondingly, the new pupils at any one secondary arrive from a range of primaries.

### 5.3 Addressing the problem

So what schemes are there which have been used in the UK to boost the literacy attainment of lower-achieving pupils at primary/secondary transition (principally Years 6–7)?

To be relevant to this question, a scheme would ideally need to be in use by at least one secondary school and at least one of its feeder primary schools, and the schools would be collaborating to ensure continuity of literacy teaching and progression in literacy learning for the pupils involved. The pupils would ideally be experiencing the scheme at least in their last term in primary school and their first term in secondary. And there would be qualitative and/or (preferably) quantitative evidence of the effectiveness of the scheme.

There are very few schemes that meet all those criteria, so in this chapter I have spread the net wider. I have included schemes which focus on low-achieving children either while they are still in primary school, or immediately they have entered secondary, but which in either case are specifically intended to tackle the problem of poor literacy at transition. The first three schemes analysed in [chapter 6](#) on older teenagers, and the first two datasets mentioned in the chapter on children with special needs, had some children aged 10–11 in their samples, and may provide further insights. The literature also contains copious advice on, and principles for, successful management of primary/secondary transition, both in general and with special reference to literacy, and examples of good practice on transition in general. I summarise a little of that literature at the end of the chapter.

## 5.4 West Dunbartonshire Literacy Initiative

Logically, the best way to ensure that all children arrive at secondary school with good enough literacy to cope with the increasing demands of the curriculum (and life) would be to make earlier stages of education so effective that virtually no children leave the primary phase with poor reading and writing. This principle inspired the West Dunbartonshire Literacy Initiative, whose declared aim from its inception in 1997 was 'Eliminating illiteracy within a decade'.

West Dunbartonshire, the second most disadvantaged LA in Scotland, carried out a ten-year project with that vision. It involved motivating and mobilising children, parents, politicians and school staff, and a sustained policy focus over the decade. The project had ten strands:

1. Phonological awareness and the alphabet
2. A strong and structured phonics emphasis
3. Extra classroom help in the early years
4. Fostering a 'literacy environment'
5. Raising teacher awareness through focused assessment
6. Increased time spent on reading
7. Identification and support of children failing
8. Lessons from research in interactive learning
9. Home support for encouraging literacy
10. Changing attitudes, values and expectations

The intervention adopted under strand seven was Toe by Toe, which certainly enabled many children to make up some lost ground – see sections [3.26](#) and [3.37](#) and the associated analyses.

But did the initiative as a whole succeed? In one sense, yes: whereas a decade earlier many children had left the 35 primary schools in the county not yet functionally literate, in 2007 only three children did so – at least by the criterion adopted by those running the initiative. That criterion was that 'at the beginning of June 2007 only three pupils remained with Neale Analysis scores below the 9y 6m level of functional literacy' (Mackay, 2007: 31). This is curious – many authorities would place the threshold of functional literacy at a reading age of 11. Nevertheless, this initiative achieved a great deal, and deserves to be imitated.

### References

Mackay (2006, 2007)

## 5.5 Helen Arkell Y7 Transition Project

Staff at the Helen Arkell Dyslexia Centre in Farnham, Surrey, had become increasingly aware that many pupils, especially perhaps those with dyslexia-SpLD, find the transition to the more demanding secondary curriculum difficult.

### Scheme

Drawing on a one-group pilot study in 2009–11, the Centre carried out a small quasi-experiment in 2010–12 comparing its provision for Y7 pupils with normal classroom teaching. Specialist teachers, trained at the Centre, carried out the intervention. The structure of the teaching programme was informed by individual diagnostic assessment reports and the wishes of the pupils. A formal intervention programme was not employed. Teachers designed the intervention around the specific needs of each pupil. Some focused more on language skills, some on writing skills, some on reading skills, and some on spelling. Specific guidance was provided to help teachers provide speech and language support where necessary. Emphasis was placed on transfer of skills outside the one-to-one teaching situation and on improving independent learning and self-confidence. Teaching was based on the principles that teaching should aim to

- improve pupils' ability to access the curriculum across a range of subjects, but particularly those with a heavy literacy component, e.g. history, geography, science
- improve pupils' ability to be independent learners by encouraging them to recognise and develop a range of strategies appropriate to different situations
- help develop skills needed in Y7, such as research and study skills, reading for meaning, summarizing, answering questions from a text, interpreting information and putting it into their own words, reading and following instructions, using dictionaries.

### Evaluation

Staff at the Centre provided data on the project. There were 16 pupils in the experimental group, and 16 in the comparison group. Given the small samples, it was not surprising that few statistically significant differences were found. However, useful effect sizes were found for reading fluency, reading accuracy and spelling, though the last two owed more to the comparison group losing ground than to the experimental group's gains.

### Reference

Bark (2012)

### Contact

The Helen Arkell Dyslexia Centre  
Arkell Lane  
Frensham  
Farnham  
Surrey GU10 3BL  
T: 01252 792 400  
[www.arkellcentre.org.uk/](http://www.arkellcentre.org.uk/)

## Helen Arkell Y7 Transition Project

**Main reference:** Bark (2012)

**Research design:** Matched-groups two-group pre-test/post-test quasi-experiment

**Date:** 2010–12

**Age range:** Y7

**Type of children:** All had average CAT/MIDYIS scores but weak literacy skills on entry to year 7. None had EBD.

**N of experimental group:** 16 in three schools in or near Farnham, Surrey

**N of comparison group:** 16 in same schools

**Equivalence of groups:** Schools assigned pupils to experimental or comparison group based on ease of timetabling; pre-test scores did not differ significantly

**Length of intervention in weeks:** 20–26

**Tests:** Test of Word Reading Efficiency (fluency); Wide-Range Achievement Tests, fourth edition, single word reading test (accuracy) and spelling test

**Pre- and post-test average standardised scores, gains and s.d's, effect sizes calculated as the differences in gains divided by the pooled post-test s.d's, and statistical significances:**

Test	group	pre-test		post-test		gain		effect size
		ave.	(s.d.)	ave.	(s.d.)	ave.	(s.d.)	
TOWRE	exps	95.8	(5.4)	98.3	(6.9)	2.5	(5.9)	0.36
	comps	95.9	(8.2)	95.4	(9.5)	-0.5	(5.5)	
WRAT4 reading	exps	91.4	(7.7)	92.8	(5.4)	1.3	(3.7)	0.52
	comps	91.4	(9.2)	90.0	(6.4)	-1.4	(6.5)	
WRAT4	exps	92.4	(4.7)	92.9	(5.7)	0.5 *	(3.7)	0.61
spelling	comps	93.5	(4.9) *	91.3	(7.1)	-2.2	(4.9)	

\* p<0.05; all other differences ns

**Ratio gains:** n/a

**Starting and ending levels and progress:** Pre-test averages show all groups were slightly below national norms. The only significant pre/post difference was that the comparison group got worse on spelling, the only significant difference in gains was on spelling, and none of the post-test differences between groups were significant – but significant findings would not often be expected with such small samples. The effect size for reading fluency (TOWRE) shows modest progress. Although the useful effect sizes for reading accuracy and spelling owe more to the comparison group's relative decline than to the experimental group's progress, the experimental group did make some progress.

## 5.6 The Sponne Cluster English Transition Unit

### Scheme

Literacy at transition has been the focus of special efforts at the Sponne School in Towcester, Northamptonshire, and its cluster primaries since 2006. In the summer of 2007, an 'English Transition (study) Unit' was 'implemented for pupils to work on at the end of Year 6 and then continue for the first term at secondary school... Also, in 2009 and 2010 a Drama Workshop was introduced in Year 6 to enhance the Unit and to enable a more relaxed transition' (Button, 2010). Over the four years 2007–10 two Transition Units were used in alternate years, namely 'Canterbury Tales' and 'Kensuke's Kingdom'. In 2007–09 the literacy specialist who implemented this system also taught Catch Up Literacy (see [section 3.6](#)) to low-attaining Y6 children in the cluster primaries, and trained other staff to continue using it. She also used Read Write Inc. Fresh Start (see [section 3.33](#)) with Y7 pupils after transition if they still needed a further boost.

### Evaluation

Although the data in Button (2010) do not allow the calculation of impact measures, the general picture is of substantial percentages of children who had received Catch Up Literacy making good progress in reading age in Y6 and/or achieving level 4 reading in the KS2 tests. Also, at the beginning of school year 2008/09 only 3% of pupils entering the secondary school failed to reach the maximum reading age of 10:6 on the Salford Sentence Reading Test. In 2009/10 the figure was 7%, but this seems to have been a cohort effect, and support for these pupils in Y7 reduced the figure to 3% by the end of the school year. Within a group of about 35 pupils who received Catch Up Literacy in Y6 (and sometimes earlier) and were tracked into Y7, most appeared to have made good progress. The salient features here seem to be substantial, targeted provision for individual pupils with firm teaching approaches, and activities to generate interest and build self-confidence.

### Historical footnote

In the first edition of this review (Brooks *et al.*, 1998), the only scheme featured which had been devised by a single primary school for itself was based at St Lawrence primary school in Towcester, which is now (under a different name) one of the schools in the Sponne Cluster.

## 5.7 North Lanarkshire Literacy Pilot

### Scheme

A 'literacy pilot' in North Lanarkshire in 2004–06 involved three 'learning partnerships' between secondary schools and a number of their feeder primary schools; these were designed in particular to help all children (including, but not only, the lowest achievers) at transition from Primary 7 (P7) to Secondary 1 (S1), which in Scotland typically occurs at age 12. Specialist literacy staff contributed to teaching in both primary and secondary schools.

### Evaluation

In addition to largely positive qualitative feedback, quantitative evidence was gathered in the form of percentages of children achieving levels D and E of the Scottish 5–14 attainment scale in reading and writing. The average pupil is expected to achieve level D by the end of P7 and level E by the end of S2. Results for children tracked from P7 through S1 into S2 mainly showed that the percentages achieving the target levels had increased (but, oddly, the actual numbers of pupils involved are nowhere stated).

### Reference

Bryan *et al.* (2007)

## 5.8 ENABLE in Glasgow

The acronym stands for Eastbank Network for Academic, Behavioural and Learning Education – this scheme is not to be confused with the English scheme with the same acronym described in [chapter 3](#).

### Scheme

This project operated only at Eastbank Academy in Glasgow, and ran from 2002 to 2006. It was aimed at low-achieving vulnerable pupils in S1 and S2, who received separate literacy (and numeracy) lessons in those two years, mainly from primary-trained teachers, before rejoining mainstream classes for those subjects in S3. Though no primary schools were involved, ENABLE can be considered a transition project because of its focus on the lowest-achievers from their entry to secondary school and the involvement of primary teachers.

### Evaluation

The main quantitative evidence consisted of pupil records for 121 participating children. Only 2% had reached level D in reading and writing on entry to S1, but by the end of S2 58% had achieved this level in reading and 50% in writing, including 18% and 7% respectively who had also achieved level E.

The salient factor in both these Scottish schemes appears to have been cross-phase teaching.

### Reference

Bryan *et al.* (2007)

## 5.9 All Change! in Derbyshire

### Scheme

This project was carried out by ROWA! (Read On – Write Away!), a literacy initiative funded by Derbyshire County Council, in 2008–09. The project worked with 15 families of Y6 children who were due to transfer to Y7 in September 2009. They all came from one primary school; 13 transferred to one secondary school, and the other two to a different secondary. The Y6 children were identified from the full cohort at their primary school, through consultation between their teachers and the county’s educational psychologist, as being liable to suffer educational disruption at transition. Self-rating data also showed they were markedly less confident than their peers. They were paired with Y8 pupils of the first secondary school, and met and worked with them on a variety of activities from January to October 2009. They were dubbed ‘researchers’ and given the task of collecting information on the secondary school by exploring and investigating it. They wrote and presented reports on what they had found. In the intervening summer the Y6 and Y8 pupils made two joint library visits, one about ICT, the other about poetry. The Y8 pupils were mainly from the secondary’s Gifted and Talented group. They had to submit a formal written application, with references, to become mentors, and were interviewed, selected and trained for the job.

### Evaluation

Data gathered from the target group early in Y7 showed that their confidence had improved, even though it was mainly still below their peers’, and that they had found their pre-transition fears had not materialised. All but one had settled in well. Their parents’ views on the initiative were strongly positive. No achievement data were available and the numbers involved were small, but in every other respect this seems to have been an exemplary project.

### Reference

ROWA! (2010)

### Contact

Sadly, none – ROWA! closed down in summer 2012.

## 5.10 Good ideas and good practice on mitigating the transition problem

There is a plethora of relevant information; I summarise only what seem to me to be the few best and most relevant ideas.

At a general level, the London Challenge report (Fuller *et al.*, 2005: 4–8), classified good practice on transition into five ‘Transition Bridges’, as summarised in Table 5.1.

**Table 5.1: ‘Transition Bridges’ as classified by the London Challenge report (Fuller *et al.*, 2005: 4–8)**

<b>‘Transition Bridge’</b>
‘Administrative bridges’ are focused on ensuring effective and robust administrative arrangements to support transition, e.g. pupil records transfer, administrative meetings between key school staff, common procedures.
‘Social and personal bridges’ are focused on improving primary school pupils’ and their parents’ familiarity with the school, layout and atmosphere. They also ensure that effective pastoral support is in place.
‘Curriculum bridges’ are focused on improving the continuity in the curriculum between Y6 and Y7 to ensure that secondary school teachers build on the curriculum covered to date and seek to teach to pupils’ strengths.
‘Pedagogical bridges’ focus on improving the continuity in teaching and classroom practice between Y6 and Y7. [They] seek to counter stereotypes held by teachers in each phase and to encourage cross-phase professional support and dialogue.
‘Autonomy and managing learning bridges’ focus on ensuring that pupils are seen as active participants in the transition process and in their own learning.

Sutherland *et al.* (2010: 7) floated the apparently novel idea of ‘a transition model in which Year 6 pupils transfer to secondary school in June. Such a model could involve primary pupils spending three days in a secondary school and two days in their primary school.’ This might incorporate all the Bridges suggested by the London Challenge – but the administrative complications may doom it.

Two other general reports with ideas which can be used to support transition come from a project for the Centre for Excellence and Outcomes in Children and Young People’s Services (C4EO) on ensuring that children remain engaged across all transitions between key stages (Evans *et al.*, 2010), and the EPPSE 3–14 project report, *What makes a successful transition from primary to secondary school?* (Evangelou *et al.*, 2008).

More specifically, the National Literacy Trust website used to have a very useful page of ideas for maintaining pupils’ interest in reading across transition. This is reproduced in full in [Table 5.2](#).

**Table 5.2: Suggestions from the National Literacy Trust website**

**Transition: Year 6 to 7**

**13 Aug 2009**

How can we ensure that children don't lose interest in reading when they go on to secondary school? Even though transition is a complex process, it is undoubtedly most effective when primary and secondary schools work closely together to understand each other's worlds.

How does reader development fit into it all? A secondary and feeder primary school with reading for pleasure positioned right at the heart of their School Improvement Plans will be in a good position to encourage effective transition in this area. If this is not the case, it becomes even more important to make sure that reading for pleasure projects are integrated into existing transition units.

**Joint staff initiatives**

- Joint INSET is the best way forward. Make sure there is a slot which addresses how reading is developed and promoted in all the schools.
- Work shadowing is a good opportunity for school librarians/literacy coordinators/teachers to understand how reading is developed and promoted in each other's schools.

**Joint pupil initiative**

Joint pupil initiatives are equally as important as those for the staff, as the child should be at the centre of the transition process. Maximising communication between Year 6 and Year 7/8 readers is really important. A possible scheme could involve setting up a buddy reading scheme between Year 6 and Year 7 students.

**Information sharing**

An effective exchange of information between you and your feeder primary schools is key. As well as sharing information about reading and writing levels, it is a good idea to ask primary schools for a 'reading for enjoyment profile' to come up with Year 6 pupils to secondary school. If this is difficult, Year 7 pupils could create their own reading profiles in the first term of secondary school.

**Family involvement**

Where good family involvement in supporting reading has been achieved at primary school, this information needs to be passed on as part of the transition process. Induction day provides the best opportunity for secondary schools to promote reading to new families.

**Practical ideas:**

**Establish postcards from the gap**

Liaise with local schools so that Year 6 pupils send their summer good read recommendations to their new school for display in the school library or in new tutor rooms.

**Joint primary secondary INSET**

Organise a joint 'whole school reading culture INSET' involving the secondary school and (some of) its feeder primary schools

**Table 5.2: Suggestions from the National Literacy Trust website, cont.**

### **Legacy reading lists**

In the summer term, Year 7 Reading Champions could create a reading list for the next year's intake, explaining why they have made their choices.

### **Work shadowing**

To create mutual understanding, secondary school librarians could work shadow the primary literacy coordinator/school library coordinator and vice versa.

### **Year 6 using the secondary school library**

Offer primary school pupils the chance to visit their secondary school library, especially Year 6 pupils in the summer term. Reading Champions email pen pals/buddies

Buddy up Year 7/8 Reading Champions with Year 6 pupils and run a 'Breakfast readers club' at the local primary school.

### **Joint Summer Reading Challenge (SRC) project**

Promote the SRC at the summer term induction day and follow this up with a Year 7 celebration event in the autumn term to reward the pupils that have completed the challenge.

### **Surveying Year 7 pupils' attitudes to reading**

As well as finding out about what the children have read at primary school, it is important to find out what attitudes to reading are. Download the Reading Connects survey from the Resources section of the website.

### **Year 7 Reading Champions talks**

In the summer term arrange visits by the Year 7 Reading Champions to their old primary school to enthuse the Year 6 pupils about the reading opportunities they will have at secondary school.

### **Transfer profile**

Set up a system so that a 'reading for pleasure profile' goes with the Year 6 pupil to secondary school. This could outline attitudes and reading habits, as well as books read.

### **Parent power**

Parents are more likely to be interested in the school when their child is just moving up to secondary school. Use this interest to enrol parents on 'Keeping up with the kids' literacy classes, computer literacy classes or encourage them to volunteer to get involved in the life of the school.

### **Visits**

Plan a series of visits to feeder primaries to promote reading. The school librarian could visit schools after SATs with Year 7s and promote the reading lists they have developed. Recommendations from subject staff in the secondary school could also be used to encourage pupils to find out more about what they will be learning.

### **Reading Buddies**

You may like to use a buddying project as an opportunity to build stronger links with your local primary/secondary school. Buddying projects between Year 7/8 pupils and Year 5/6 pupils can link in effectively with transition strategies.

Schools and local authorities that implemented even a few of these strategies would be embedding much good practice.

Rose (2009: 96) supported the idea of an 'extended study' which, for example, might be started by children in the summer term of Year 6 and completed at the end of that term or in the first term of Year 7. This study would be shared with their new secondary school as tangible evidence of children's capabilities alongside KS2 assessment data. Where close co-operation is possible between primary and receiving secondary schools, the extended study would be jointly planned and designed, and opportunities for shared teaching between primary and secondary staff considered.

This echoes the good practice found in the Northamptonshire and Derbyshire initiatives listed above, and may be the most practical way of tying together many of the National Literacy Trust's ideas.

## 5.11 Tentative conclusions on boosting literacy at transition

### General

Facets of good practice which come through strongly from the literature are:

- the need for unrelenting attention to this area; if attention is relaxed it seems certain that results will decline
- the need (as always) for top management of schools (etc.) to be involved
- the fact that single-approach solutions are not enough, and that effective transition is multi-faceted
- the need to find creative, practical activities which tie together what are agreed to be good principles and ideas.

### Specific to literacy

It is of course essential to engage the pupils' interest in the materials used.

One-to-one teaching is often advisable, so that the students do not lose face with their peers.

A key facet in the Sponne Cluster, 'All Change' and the two Scottish schemes appears to have been cross-phase teaching, in the sense that primary teachers were involved in secondary schools and *vice versa*, and/or that common materials and pedagogies were used.

### Limitations

Some limitations in the evidence should be noted. First, the number of studies is small, and generalisations from them need to be understood as very tentative.

Second, much of the emphasis and evidence concerns reading, and there is less on writing.

Third, it seems that, as Galton *et al.* (2003: 109) put it, 'Very few transition initiatives are properly evaluated.' They themselves carried out a highly detailed and comprehensive qualitative evaluation of transition schemes and arrangements. They found that practice had improved noticeably between 1999 and 2002, especially towards a greater emphasis on pedagogic and curriculum continuity, as opposed to the previously predominant emphasis on administrative arrangements and social easing of transition for pupils (which are necessary but not sufficient). Galton *et al.* also found that some case-study schools were making good use of Bridging Units (see again the Sponne Cluster and 'All Change'), teacher exchanges, and summer catch-up programmes, but provided no quantitative evidence on any of these, even though Bridging Units and literacy summer schools by definition would require close attention to pupils' literacy. There are clearly different definitions of what it means for an initiative to be 'properly evaluated'.

# Chapter six

## Schemes for young people aged 14–18, including those who have offended

This chapter covers both 14- to 16-year-olds who are (supposedly) in school in KS4 (Years 10–11), and 16- to 18-year-olds, whether they are attending KS5 (Years 12–13) in a school or a college of further education or not. Some of this age-group are disengaged from education or training, and a small proportion are in trouble with the law. Many young people in this age range have poor literacy, and if the plans to raise the ‘participation age’ in England to 17 in 2013 and then to 18 in 2015 come off, the need for relevant and effective schemes will become even more acute.

### 6.1 The scale of need

The most recent (2009) PISA (Programme for International Student Assessment) results showed that 18% of 15-year-olds had reading attainment at international level 1 or below, equivalent to UK entry level or below (Bradshaw *et al.*, 2010), and the Skills for Life survey of 2011 showed that 15% of 16- to 19-year-olds were at the same level (BIS, 2011). In their summary of all the nationally representative evidence on the literacy levels of 13- to 19-year-olds in England, 1948–2009, Rashid and Brooks (2010) concluded that this situation had not changed for some years.

The literacy levels of young people who have offended are even lower. In a study conducted for the Youth Justice Board (Ecotec, 2001), an analysis was carried out of the reading levels recorded in the Detention and Training Orders of 1,454 young people, aged 14 to 18 in young offender institutions (YOIs) in March 2001; 52% were reading at Entry Level or below. In 2007–10, Ecotec/Unitas tested the reading levels of 830 young people aged 14–19 who had offended and were attending their Summer Arts Colleges (Tarling and Adams, 2011); 78% were reading at Entry Level or below. Various smaller studies confirm this picture (Brooks and Tarling, 2012, in press).

Another group with reportedly low literacy levels is Gypsy Roma Travellers, though reliable statistics are hard to come by.

### 6.2 Earlier evidence

Only the third edition of this review covered any part of the secondary age range; there was very little evidence for KS4, and none for 16- to 18-year-olds. Only one scheme, BECTa’s Integrated Learning Systems, had separate data for KS4 pupils, and it was totally ineffective. Two others, Paired Reading and Reading Intervention, had some data for KS4, but mixed in with other year-groups.

Analysis by Brooks and Tarling (2012, in press) showed that three schemes for young people who had offended, which had been run earlier than those analysed below, had little effect.

### 6.3 New schemes

It is therefore heartening that three new schemes have not only been developed in recent years, but have provided substantial quantitative evidence of their effectiveness for literacy: *TextNow* and Summer Arts Colleges (both run by the Unitas charity) and That Reading Thing. In the evaluations of all three schemes, some of the participants were aged 10–11, so they may also provide some lessons for literacy at primary/secondary transition. The schemes take two very different approaches: That Reading Thing is entirely and deliberately based on synthetic phonics, while both *TextNow* and Summer Arts Colleges emphasise and encourage reading for pleasure.

In addition, Sound Training for Reading has been used successfully with Y11 pupils, Sound Reading System has been used with some success in at least one YOI (for both of these see below), Dyslexia Action is working with several Youth Offending Teams– see <http://www.dyslexiaaction.org.uk/Pages/Display.aspx?IDPost=9784d0dd-16e1-48bc-8ad6-77ce013434fb>, and the Shannon Trust Reading Plan, which is based on Toe By Toe, is in widespread use with offenders, including young people who have offended. According to the obituary of Christopher Morgan, founder of the Shannon Trust, *Guardian*, 11/5/11, p.35, it ‘is in place in almost every prison in Britain. Last year, 9,000 prisoners learned to read by the method and, all told, 50,000 prisoners have been helped by the trust since it was founded’ in 1997.

Valuable lessons could also be learnt from an international project carried out in 2007–09, ADORE – Teaching Struggling Adolescent Readers in European Countries (Garbe *et al.*, 2010).

The scant literature on projects for Gypsy Roma Travellers is represented here by a summary of one mounted by Catch Up Literacy.

## 6.4 Outcomes other than literacy

For most providers of schemes for young people with poor literacy, improving their reading and writing would be sufficient, and all the schemes featured in this chapter achieve that. But when working with young people who have offended, it is important to try to get their lives back on track, in terms of education, training or employment (ETE) rates and reductions in offending.

*TextNow*, Summer Arts Colleges and That Reading Thing were all originally focused on young people in trouble with the law or at risk of it. However, at present, That Reading Thing has few participants in that category, and its providers would not have the resources, or be in a position, to gather the forms of follow-up data needed to judge its effect on ETE or offending.

About a fifth of the young people in the evaluation of *TextNow* had offended. The provider, Unitas, is gathering data on ETE and offending rates, but is not yet in a position to publish them. However, these young people’s attitudes to reading improved markedly.

All participants in Summer Arts Colleges and the Shannon Trust Reading Plan are offenders. Because it works closely with the Youth Justice Board, Unitas can in this case gather ETE and offending data after Summer Arts Colleges, and the outcomes on both measures have been very positive. There appear to be no such data for Shannon Trust Reading Plan.

## 6.5 TextNow

### Scheme

*TextNow* is run by the educational charity Unitas (which also runs the Summer Arts Colleges – see below) and is designed to boost the engagement with, and attainment in, reading of young people aged 10–18 who struggle with reading, both those in mainstream education and those disengaged from it. It developed from previous initiatives intended particularly for young people who have offended.

Its specific objectives are to:

- motivate young people to read, increase their enjoyment of reading and improve their reading skills
- help young people choose appropriate reading material and make sense of it through discussion and other activities
- raise confidence and self-esteem by encouraging young people to explore different reading materials, read alone, and navigate available services such as libraries.

It consists of a 20-minute reading session each weekday for ten weeks supported by a trained volunteer coach, a starter library and an awards scheme – attendance and participation generate ‘credits’, which young people can use to select books of their choice through an online bookshop. Since 2008 *TextNow* has been run in a substantial number of sites across England and Wales, including mainstream schools, FE colleges, Training Provider programmes, Educational and Behavioural Difficulties schools, Pupil Referral Units, Youth Offending Team sites, and YOIs, and for a small number of Looked After Children in foster care.

### Evaluation

The providers of the scheme have been gathering data on it (and on a scheme it grew out of called *Reading Matters*), and submitting the data to outside analysis, since 2007. In the three years 2008–11 a total of 926 young people began the programme, and 696 completed it, in the sense that they undertook a reading test both at the beginning and at the end. Almost all of this latter group also completed an attitudes questionnaire at both stages.

The reading test results showed that the participants’ average reading level at the outset was almost five years below their average c.a., and that the scheme had remarkable impact. The young people’s attitudes also improved markedly. The results were substantially better than those of earlier British programmes for teenagers and young people who had offended.

### Disclosure

The Unitas charity commissioned and paid me to help evaluate this scheme; I analysed the data in the same way as for any other scheme, and submitted the details to independent scrutiny.

### References

Brooks and Tarling (2012, in press), Brooks, Tarling and Adams (2012)

### Contact

<http://www.unitas.uk.net/TextNow/>

## TextNow

**Main references:** Brooks and Tarling (2012, in press), Brooks, Tarling and Adams (2012)

**Research design:** One-group pre-test/post-test study

**Date:** 2008–11

**Age range:** 7–19

**Type of participants:** Young people who struggle with reading, both those in mainstream education and those disengaged from it, including some in trouble with the law

**N of experimental group:** 926 at pre-test, 696 at post-test, but 33 had scored at ceiling at pre-test and their data were discarded. Effective post-test N was therefore 663. Within this group, 115 were young people who had offended.

**Average length of intervention:** 3.3 months between pre- and post-test

**Reading test:** NFER Single Word Reading Test 6–16

**Pre- and post-test average r.a's (in years and months) and standardised scores, and average gains (s.d's not stated), RG and effect size:**

### 1) Full sample

	N	pre	post	gain	RG	effect size
Reading age	663	9:0	10:6	18.7 months	5.5	n/a
Standardised score	463	85.1	92.6	7.4 points	n/a	0.49

The sample size for standardised scores is smaller than for reading ages because many of the participants were aged more than 16:6 at post-test, and therefore out of range of the conversion table.

### 2) Young people who had offended (subset of full sample)

	N	pre	post	gain	RG	effect size
Reading age	115	9:3	10:10	19 months	5.9	n/a
Standardised score	57	88.0	95.7	7.7 points	n/a	0.51

See note below previous table.

**Statistical significances:**  $p < 0.001$  for both measures in both tables

**Starting and ending levels and progress:** The average c.a. of the full sample was 13:10 at pre-test and 14:1 at post-test. On average, therefore, they were 4:10 behind in r.a. to start with, but during the programme caught up by 18.7 months of r.a., and were then on average 3:7 behind, and still just below the functional literacy threshold of 11 years. The average standardised scores show that the participants were on average a full s.d. behind at pre-test, but (as the effect size shows) caught up by half an s.d. The RG of 5.5 means that they made five and a half months' progress in reading for each month the programme lasted.

Given that the average c.a. of the 115 young people who had offended was 14:11 at pre-test and 15:2 at post-test, on average they were 5:8 behind in r.a. to start with, but during the programme caught up by 19 months of r.a. (and aged by three months), and so at post-test were on average 4:4 behind but very close to the threshold of functional literacy. The RG of 5.9 means that they had made nearly six months' progress in reading for each month the programme lasted – a remarkable rate of improvement.

The effect sizes were moderate, but based on subsets of the participants. These improvements had come too late to benefit the education of those no longer in education or training, and probably most of those still attending at secondary level, but would better equip many of these young people to cope with the reading demands of everyday life, including employment.

## 6.6 That Reading Thing

### Scheme

That Reading Thing (TRT) is the brainchild of Tricia Millar, an experienced teacher, who decided in about 2003 to devise a linguistically-based programme to help young people with poor literacy improve their reading, and therefore their educational attainment and life chances. The fully-developed version of TRT dates from late 2007. In 2012 Tricia Millar, with Welsh-speaking colleagues, was developing a Welsh-language version called Llywio Darllen.

TRT is a phonetically accurate and meticulously organised synthetic phonics scheme. As such, it is in tune with the renewed interest in and emphasis on synthetic phonics since the Rose Report (2006). It arose from the insight that some young people's problems with reading and writing may be due to their never having got the hang of phonics, and is therefore deliberately designed to make no assumptions about each new student's level of reading and spelling. This has two consequences. First, each student is told 'The Deal': they will not be expected to know anything that they and the tutor have not covered. Second, that principle is embodied in the first four levels of the scheme, which are assessments starting from absolute zero in literacy terms. These tests are to ensure that each student starts where s/he is. The scheme has early levels which rehearse the basics of reading (word recognition) and spelling, but only those who struggle are put through all these levels in detail; those who can move ahead fast do so.

The materials are organised into 50 levels, systematically progressing from the basics to more advanced aspects of the code. Levels 5–16 teach the basic code, consisting of only the most useful and frequent graphemes and their major correspondences with phonemes. Levels 17 and 18 then serve as 'early warning of the Wall they are going to hit at Level 19', where the students embark on the advanced code, the full complex system. The materials also recognise the potential for boredom on the part of the disaffected students for whom the scheme is meant. In every teaching session there is intended to be a rapid succession of different activities focusing on different aspects of reading and spelling, and designed to move students on as rapidly as possible.

TRT is intended to be delivered one-to-one, either by paid teachers employed by a LA which has bought the scheme in, or (more often) by volunteers. All tutors receive two days' training. The tutors' manual and the accompanying CD provide them with many more materials and activities than they will need to use with any one student, but ample to cope with any student at any level. They also provide virtually word-by-word scripts for tutors to follow.

### Evaluation

Tricia Millar provided background and test data collected by her and colleagues on 123 students who had participated in TRT in the academic years 2009–11.

### Disclosure

The JJ Charitable Trust commissioned and paid me to evaluate this scheme; I analysed the data in the same way as for any other scheme, and submitted the details to independent scrutiny.

### Reference

Brooks (2012)

### Contact

Tricia Millar  
[tmillar@thatreadingthing.com](mailto:tmillar@thatreadingthing.com)

## That Reading Thing

**Main reference:** Brooks (2012)

**Research design:** One-group pre-test/post-test study

**Date:** 2009–11

**Age range:** 11–18 (average 13:11 at pre-test)

**Type of participants:** Low attainment

**N of experimental group:** 123 in various schools in Birmingham, Ellesmere Port, Huddersfield and the London boroughs of Redbridge, Tower Hamlets and Waltham Forest

**Average length of intervention in weeks:** 19

**Reading test:** Burt (1974 revision).

**Pre- and post-test average r.a's and s.d's in years and months, gain and s.d. in months of r.a., and RG:**

	Pre-test (years & months)	Post-test (years & months)	Gain (months)	RG
average	8:5	9:9	15.6	3.5
(s.d.)	(1:7)	(1:11)	(13.7)	

**Effect size:** n/a

**Statistical significance:**  $p < 0.001$

**Starting and ending levels and progress:** At pre-test the students were on average five and a half years behind, and in the semi-literate range. The RG shows substantial progress: they caught up by a year (gain minus time elapsed), and at the end were on average four and a half years behind, and still in the semi-literate range. By then, 32 (26%) had reached a r.a. of 11, the threshold of functional literacy. Judging by their progress in TRT, many others would reach this level if they attended TRT or a similarly effective programme for another term or two, or if they had 'caught the reading bug' sufficiently to develop their reading independently. But about a third would need ongoing support.

## 6.7 Summer Arts Colleges

### Scheme

The Summer Arts College programme was founded in 2005, as part of a strategic partnership between the Youth Justice Board and Arts Council England. Since then, more than 1,300 young people have taken part in a Summer Arts College across England.

The Unitas charity (which also runs the *TextNow* programme – see above) co-ordinates the Summer Arts College programme, and distributes funding to individual youth offending teams (YOTs) to run courses in their areas. Each Summer Arts College provides ten young people with a programme of structured arts activities for 25 hours per week, and runs for three, five or six weeks during the summer holiday. Young people taking part in the Summer Arts Colleges work towards achieving a mainstream qualification – the nationally recognised Arts Award. At the end of the Summer Arts College, a celebration event is held to display or perform the work that the young people have done.

There is no prescribed content for a Summer Arts Colleges; YOTs choose the art form to work in, and how to build in educational provision for literacy and numeracy skills. But all Summer Arts Colleges are staffed by arts practitioners who are experienced in working with young offenders, and a professional literacy and numeracy tutor.

Young people who take part in the programme are aged 14–19, and tend to be on higher tariff orders, such as Detention and Training Orders (DTOs) or the Intensive Supervision and Surveillance Programme (ISSP). Young people with a DTO or on ISSP require supervision for 25 hours per week which, during the summer holidays, can be challenging for a YOT to arrange. The Summer Arts College programme fulfils the supervision requirement of these orders with a structured programme of activity.

### Evaluation

Unitas commissioned an evaluation of the programmes run in the summers of 2007-10. A total of 1,142 young people took part; pre- and post-test literacy scores were gathered from 830 of them, and information on the education, training or employment (ETE) status and offending rates before and after the programmes of all 1,142. There was a useful gain in literacy, ETE rates improved substantially, and offending fell.

### Reference

Tarling and Adams (2011)

### Contact

[www.unitas.uk.net](http://www.unitas.uk.net)

## Summer Arts Colleges

**Main reference:** Tarling and Adams (2011)

**Research design:** One-group pre-test/post-test study

**Date:** 2007–10

**Age range:** 12–19 (average 16:6 at pre-test)

**Type of participants:** Low attainment; all were young people who had offended. 24% were known to have had SEN; 18% had had SEN identified and received a statement.

**N of experimental group:** 830 across 67 YOT areas in England and Wales

**Length of intervention in weeks:** Three, five or six

**Literacy test:** Basic Skills Agency *Initial Assessment*. This test delivers only raw scores, which can be converted to NQF levels. Since it provides neither reading ages nor standardised scores, impact has to be judged from the measures it does provide.

**Impact on literacy:** At pre-test, only 22% were at (adult) Level 1 for literacy, but by the end this proportion had almost doubled to 41%, the mean raw score had increased significantly from 53.9 to 57.5 and, overall, 69% of the young people increased their score, with around a third (35%) improving enough to reach at least one level higher at the end of the programme.

**Statistical significances:** Were not stated and could not be calculated

**Starting and ending levels and progress:** See above

**Other outcomes (from the full sample of 1,142):**

ETE – In the four weeks before the programme, 54% were not in education, training or employment; in the four weeks following the programme, this had fallen to 29%.

Offending – In the 13 weeks before the programme the average rate of offending was 9.1 (standardised to represent offences per 100 weeks at risk). This fell to 4.5 during the programmes. In the 13 weeks after the programmes the rate was 5.8.

## 6.8 Sound Training for Reading®

For general details of the scheme, see [section 3.34](#). It runs in essentially the same way in KS4 as in KS3.

### Evaluation

In 2010–11 the scheme was used with a group of KS4 pupils in two schools in Middlesbrough, and in 2011–12 with two groups, one of KS4 pupils in two schools in Middlesbrough and County Durham, the other a group of Y11 pupils in three London schools. The results showed remarkable impacts on reading accuracy and comprehension.

### Contact

Katy Parkinson  
Boho One  
Bridge Street West  
Middlesbrough TS2 1AE  
T: 01642 424298  
[enquiries@soundtraining.co.uk](mailto:enquiries@soundtraining.co.uk)

## Sound Training for Reading®

**Main reference:** Unpublished data supplied by Katy Parkinson

**Research design:** Three one-group pre-test/post-test studies

**Date:** 2010–12

**Age range:** (2010–11 and 2011–12, first cohort) KS4  
(2011–12, second cohort) Y11

**Type of pupils:** Mainstream pupils with reading ages on average three years below c.a..

**Ns of treatment groups:** (2010–11) 44 in two schools in Middlesbrough  
(2011–12) 35 in two schools in Middlesbrough & Co. Durham  
(2011–12) 39 in three schools in London

**Length of intervention in weeks:** Six (1.5 months used in calculating RGs)

**Reading tests:** (2010–11, & 2011–12, first cohort) WRAT4 (decoding)  
(2011–12, second cohort) GL Assessment New Group Reading Test (comprehension)

**Pre- and post-test average r.a's in years and months, gains in reading accuracy in months of r.a., s.d's in same units, and RGs:**

cohort	N	pre		post		gain		RG
		ave.	(s.d.)	ave.	(s.d.)	ave.	(s.d.)	
2010–11	44	12:3	(1:10)	15:4	(2:0)	38	(19)	25.3
2011–12, 1st	35	12:3	(1:7)	15:11	(2:4)	44	(27)	29.3

**Pre- and post-test average r.a's in years and months, gains in comprehension in months of r.a. (s.d's not stated), and RG:**

	N	pre	post	gain	RG
2011–12, 2nd	39	11:11	13:0	13	8.7

**Effect sizes:** n/a

**Statistical significances:** 2010–11 and 2011–12, first cohort  $p < 0.001$

2011–12, second cohort was not stated and could not be calculated

**Starting and ending levels and progress:** The average c.a. of these pupils at pre-test was about 15:0, so even with their functionally literate score these groups were well behind and struggling with the secondary curriculum and (presumably) their GCSEs. They made remarkable progress, and would have been much better equipped to cope with the curriculum, and life.

## 6.9 Sound Reading System

For general details on the scheme, see [section 3.22](#).

In April 2007 a number of staff at Warren Hill prison and YOI were trained to deliver the Sound Reading System. In May–August 2007 a pilot was run there involving 16 young people who received three sessions of approximately 40 minutes per week; the average number of sessions was 16. Their improvement in reading age ranged from 0–25 months, with the mode being in excess of ten months.

The scheme was expanded in 2008, and between February and June that year 76 young people received support for literacy in small classes, and accessed the Sound Reading System for 30 minutes every day. Improvements in reading age ranged from one to 35 months, with the mode being in excess of 12 months. Spelling also improved, the range being from one to 25 months, with the mode being in excess of three months.

## 6.10 Shannon Trust Reading Plan

Shannon Trust was established in 1997 and is a UK-wide charity that works with around 180 custodial establishments (including YOIs) in the UK. The Trust and the establishments jointly run the Shannon Trust Reading Plan, which is delivered by peer mentors in prisons and by LSAs in YOIs. The Reading Plan is based on the Toe By Toe scheme. Shannon Trust staff and volunteers work with prisons to train prisoner mentors/LSAs in how to use the Toe By Toe manual, recruit learners and run the scheme. Due to the wide variety of regimes in operation in different establishments, the way the scheme is run is flexible but all work towards a best practice delivery model under the following headings:

1. Effective and structured methods for identifying and recruiting learners
2. Active and re-active support from the senior management team
3. An effective process for recruiting and supporting mentors
4. High quality and regular mentor training
5. Local representative engagement and involvement
6. An effective process for data collection and returns
7. A team approach to delivery
8. The reading scheme available across the whole prison
9. Celebration events/award ceremonies/presentations
10. A high profile across the whole establishment.

This means that the scheme can be offered within education; on the wing; in the gym, health care, workshops, segregation and all areas of the establishment. Teaching takes place for 20 minutes a day, five days a week.

Since 2008 Shannon Trust has been working closely with YOIs (holding 14- to 18-year-olds) on establishing a reading network to improve provision for the younger age group. This network, funded by the Paul Hamlyn Foundation, began with five YOIs in the West Midlands and saw learner start numbers increase from 19 in 2007 to 201 in 2010, the total across the three years being 497. In 2011 the network began to be rolled out across the whole secure estate.

### Evaluation

The first three years of the West Midlands Reading Network development were evaluated by Dr Katherine Wilkinson and Joanna Davidson of the Hallam Centre for Community Justice, Sheffield Hallam University. All young offenders were administered the Salford reading test on entry, to determine whether they should be offered the Toe By Toe intervention. It was intended that the test should be re-administered every four to six weeks to those receiving the Plan, and in particular on exit from the Plan or transfer to another establishment. Unfortunately no re-test scores were available to the evaluators; it was therefore not possible to make a quantitative estimate of the impact of the Plan.

### Reference

Wilkinson and Davidson (2010)

### Contact

Shannon Trust  
89 Albert Embankment  
Vauxhall  
London SE1 7TP  
[communications@shannontrust.org.uk](mailto:communications@shannontrust.org.uk)  
[www.shannontrust.org.uk](http://www.shannontrust.org.uk)  
<http://www.kedalearning.co.uk/prison.html>

## 6.11 Catch Up Literacy

For general details on the scheme, see [section 3.6](#).

Catch Up (2011) reported on a pilot project undertaken in collaboration with the Lancashire Gypsy, Roma and Traveller Achievement Service, the county's Access to Services branch and Skerton High School. In the autumn and winter of 2010–11, Catch Up staff trained Lancashire library staff in the use of Catch Up's Digital Games, and the librarians then introduced them initially to 37 learners, of whom two were adults, two were of primary age, and the rest were of secondary age. A total of 23 took the Salford reading test at the beginning. Five had reading ages above 10:6, and no further data were gathered from them. The two adults and seven of the secondary-age learners declined to continue, leaving nine. Of these, seven took the test again at the end, achieving an average RG of 3.5.

All of this illustrates the need for such projects, the difficulties of mounting them, and the possibility of good progress for those who can be persuaded to persist.

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# Appendix to Part 1: Details of the evaluations

The central part of this appendix is a log of the 32 mainstream schemes, in the same order as in [chapter 3](#), namely: (A) schemes for reading and spelling at primary level; (B) schemes for reading and spelling at KS3 level; (C) schemes for writing at both levels. Under each scheme are listed the salient statistical and related data used in the analysis in this report. Before the log, the nomenclature of school years and my abbreviations are explained, and the organisation of the entries is described; and that description is followed by a number of notes of clarification.

After the log of the 32 interventions, the basis on which schemes have been compared is explained.

Very few schemes have alternative treatment, control or comparison groups, or provide follow-up data. In this edition I have therefore given up noting the absence of such information.

## Key to school years

Label of school year				
in England and Wales	in Scotland	in Northern Ireland	in North America	Age of pupils (in years)
Reception	Preschool	P(imary) 1	Pre-kindergarten	4–5
Year 1	P(imary) 1	P(imary) 2	Kindergarten	5–6
Year 2	P(imary) 2	P(imary) 3	1st grade	6–7
Year 3	P(imary) 3	P(imary) 4	2nd grade	7–8
Year 4	P(imary) 4	P(imary) 5	3rd grade	8–9
Year 5	P(imary) 5	P(imary) 6	4th grade	9–10
Year 6	P(imary) 6	P(imary) 7	5th grade	10–11
Year 7	P(imary) 7	S(econdary) 1	6th grade	11–12
Year 8	S(econdary) 1	S(econdary) 2	7th grade	12–13
Year 9	S(econdary) 2	S(econdary) 3	8th grade	13–14
Year 10	S(econdary) 3	S(econdary) 4	9th grade	14–15
Year 11	S(econdary) 4	S(econdary) 5	10th grade	15–16

## Abbreviations

acc	(reading) accuracy	N	sample size
AT	alternative treatment	n/a	not applicable
BASWRT	British Ability Scales Word Reading Test	ns	non-significant
c.a.	chronological age	r.a.	reading age
comp	comprehension	RG	ratio gain
comps	members of a comparison group	s.a.	spelling age
conts	members of a control group	s.d.	standard deviation
exps	members of an experimental group	ss	standardised scores
LA	Local Authority	stand.	standardised
m	months		

## A.1 Introduction to the evaluation data

The entries below are organised, as far as possible, in the order shown in Table A.1.

**Table A.1: Organisation of entries in log of studies**

	See note
Name of intervention	
Main reference(s)	
Research design	1
Date when it was implemented	
Age range of children involved, in school years (Y2, etc.)	
Type of children involved	2
Number of pupils in experimental group	
Number of pupils in alternative treatment group, where there was one	
Nature of alternative treatment	
Number of pupils in control/comparison group, where there was one	
For each group, numbers of schools and LAs, where known	
Equivalence of groups, where there was more than one	3
Length of intervention in weeks	
Reading and/or spelling test(s) or writing assessment used	4, 5
For each group (where known), pre- and post-test average scores, and units in which these are stated	6
For each group (where known), difference between pre- and post-test average scores ('gain') in relevant units	7
For each group, where scores are reading/spelling ages (r.a's/s.a's), ratio gain (RG), stated to one decimal place	
Effect size (where this was known or could be calculated), stated to two decimal places	
Statistical significance of differences between pre- and post-test scores, and between experimental, control/comparison and alternative treatment groups, where known	
Summaries of starting and ending levels and progress	
Follow-up data, if any	

## Notes to Table A.1:

1) **Research design:** categorised as one of

	<b>N</b>
randomised controlled trial (RCT)	6
matched groups quasi-experiment	9
one-group pre-test/post-test study	at least 59

In the previous edition I also classified some studies as unmatched groups pre-test/ post-test studies. In this edition I no longer give data from the ‘comparison’ groups in such studies, and treat them as one-group pre-test/post-test studies, because

- comparisons between the experimental and comparison groups are unreliable
- the data from the comparison groups are of little importance in their own right.

Altogether, at least 74 studies are analysed in this appendix; the uncertainty is due to the bundling-together of many one-group studies under A.R.R.O.W. (England & Wales) and Catch Up Literacy (national data). Also, two studies (Catch Up Literacy pilot, Paired Reading) had a mixture of designs; they have both been classified as quasi-experiments even though they also had one-group aspects. The total of 74 or so is substantially fewer than in the previous edition, in which there were 121 studies. The major reason for the decrease is the tightening-up of the criteria for including mainstream schemes – see [chapter 1](#). A minor reason is that a few studies (4) have been moved to [chapter 4](#).

The numbers on the right above show how many studies had each type of design. Where effectiveness research is concerned, RCTs are the gold standard because they alone permit all possible known and unknown biasing factors to be ruled out. This is why the only no-treatment groups that are called ‘control groups’ in this report are those within RCTs. The six studies which had this type of design, with indications of total sample size across groups and of outcomes (> = ‘made significantly more progress than’), are listed in Table A.2.

**Table A.2: List of randomised controlled trials**

<b>No.</b>	<b>Name</b>	<b>N*</b>	<b>Outcome</b>
8	Easyread	95	Exps > cont
11	Inference Training (Glasgow)	40	Less skilled comprehenders in exp gp > those in AT group
28	Catch Up Literacy (KS3, Nottingham)	85	Exps > cont
38	Paired Writing (P4)	64	Cross-ability exps > cont; same-ability exps made little progress
38	Paired Writing (P6)	26	Exps > cont
41	Grammar for Writing	744	Exps slightly > cont

\* N = total sample size across groups

At first sight, Table A.2 would suggest strong confidence in the effectiveness of the named schemes (except for same-ability in Paired Writing). However, it has been known for interventions which work fine in ‘laboratory’ conditions (i.e. when administered and/or monitored by researchers) to produce little or no effect when rolled out in field conditions – for a clear example (provided by Sue Ellis, one of the authors), see McCartney *et al.* (2011). Another problem for most of these interventions is the small sample sizes. It will be apparent that

some of these RCTs qualified for this edition despite their small Ns. At the other extreme, Grammar for Writing is by far the largest RCT featured (its sample outnumbers the other five, whose Ns total 310). It also had a cluster design to take account of the fact that the pupils involved were grouped within many schools. This study ought now to set the standard for new research in the field.

Random allocation is not always possible, so researchers often resort to matching groups on known characteristics. The nine quasi-experiments with this type of design are listed in Table A.3.

**Table A.3: List of matched-group quasi-experiments**

No.	Name	N*	Outcome
6	Catch Up Literacy (within pilot study)	48	Exps > AT and comps
11	Inference Training (Sussex)	52	Good for poor comprehenders, less so otherwise
13	Paired Reading	1026	Exps > comps
16	The Reading Intervention Programme (original, Cumbria)	124	Exps > other groups
17	Reading Recovery, London & Surrey	281	Exps > both comp groups during project, but mostly washed out three years later except for children who were non-readers at start
17, 39	Reading Recovery, ECar in London	254	Exps > comps for both reading and writing
24	The Complete Spelling Programme	81	Exps > comps
34	Sound Training for Reading (Y9)	91	Exps > comps
37	Toe By Toe (secondary)	24	Exps > comps

\* N = total sample size across groups

All these schemes seem worthwhile, on this evidence.

For more tabulation, and for the 59 or so one-group pre-test/post-test studies, see the tables at the end of this appendix.

2) **Type of children:** categorised as one of

SEN – identified as having special educational needs

Low attainment, which will in many cases include children identified as having SEN

Mixed ability – though this still means that the group studied was underachieving, on average, by national standards.

None of the studies analysed in this appendix were concerned specifically with children with specific special needs as a whole or with children with dyslexia in particular – for such studies see [chapter 4](#) – but given the

estimated incidence of dyslexia in the population (4–10%) it is highly likely that groups categorised as SEN or low attainment would include some pupils with dyslexia.

### 3) Studies with alternative treatment groups:

Only four of the studies in this edition had AT groups as part of the design. They are listed in Table A.4.

**Table A.4: Studies with alternative treatment groups, by method of allocation and whether also had no-treatment group**

No.	Scheme	Method of allocation	No-treatment group?
6	Catch Up Literacy (pilot) *	Matching	Yes
11	Inference Training (Sussex)	Matching, but some differentiation on comprehension	No
11	Inference Training (Glasgow)	Matching, but some differentiation on comprehension	No
16	The Reading Intervention Programme (original in Cumbria)	Random within matched quadruples	Yes

\* = study with one AT group; others had two

For the purposes of this report, all of the allocations to groups in these studies are treated as reliable.

- 4) **Choice of tests to report:** Almost all these studies used more than one instrument to measure impact, and most used several. Only reading and spelling test and writing assessment results have been analysed here, on the grounds that the main focus of this enquiry is interventions designed to boost literacy attainment. Some reading tests yield more than one score (for example, depending on how it is administered, the Neale Analysis can give scores for both reading accuracy and reading comprehension); where this is so, both sets of data have been given. Except where it is clear that they yield measures of comprehension, the reading tests cited have been classified as giving measures of reading accuracy.
- 5) **Range of tests used:** A great variety of reading tests was used in the studies under consideration, ranging from various editions of the Burt test (first published in the 1920s) to much more recent and more reliable instruments. Only a few spelling tests were used, but again some were rather old, especially the Schonell. Use of old tests may limit the reliability of some of the findings. Each of the writing studies analysed used a different form of assessment – for details, see the separate entries in part C of this appendix – but all were recent.
- 6) The units in which average scores and s.d's are stated are almost always either reading/spelling ages or standardised scores, occasionally both. Raw scores have been used in a few cases, namely Reading Recovery in London and Surrey, Paired Writing (both studies), ECaR in London (writing data) and Grammar for Writing. However, in all these cases it was possible to calculate an effect size using information from a control/comparison group.
- 7) Where the units of measurement are r.a's/s.a's, gain is given in months of r.a./s.a.

## A.2 Impact measures

In order to judge whether an initiative has really made a difference, it is not enough just to ask the participants – they will almost always say it has. This ‘feel-good’ factor is valid on its own terms, but doesn’t always correlate with measured progress, and certainly doesn’t convince policy-makers and funders. So it is essential to have quantitative data on the learners’ progress, measured by appropriate tests of (in this case) reading, spelling or writing.

But not just any test data will do: if the test provides only raw scores, the average gain may look impressive, but what does it mean? How good is it, compared with gains in other projects and/or with national norms? We need some way of comparing the impacts of different initiatives. The two forms of impact measure used in this report are ratio gains and effect sizes.

### A.2.1 Ratio gain (RG)

This is defined by Topping and Lindsay (1992: 201) as ‘the gain in reading age made by a subject on a reading test during a chronological time span, expressed as a ratio of that time span; that is, ratio gain equals reading age gain in months divided by chronological time in months’. For a group, this can be stated as the formula

$$\frac{(\text{average r.a. in months at post-test}) - (\text{average r.a. in months at pre-test})}{\text{time elapsed in months}}$$

(The definition and formula are obviously applicable to spelling too.)

This concept could also be called ‘average monthly progress’, or AMP. That label is clearer, being self-explanatory, but unfortunately is unlikely now to displace the entrenched term, ratio gain.

Calculating an RG does not require data from a control/comparison group – but where any well-matched non-experimental group and the necessary r.a./s.a. data are present, that group’s RG can and should be calculated too. Some RGs for non-experimental groups are shown in this appendix in order to highlight the greater progress of the experimental group. Normally, RGs are the only impact measures that can be calculated for one-group studies – but see below.

The dispersal of scores (as shown in the standard deviation) is ignored in RGs – only the average reading/spelling ages at pre- and post-test and time elapsed are used. RG is therefore a statistically unsophisticated device; but, as Topping and Lindsay further point out, using raw gains instead ‘renders the highly heterogeneous literature very difficult to summarise’. Also, since over half the evaluations surveyed here used reading ages as their reporting units (see the list of entries below) it seemed appropriate to use RGs in attempting to estimate the effects of those interventions.

However, RGs do take account of the length of time over which an intervention achieves its impact. As shown in the formula, this is done by dividing the gain in months of reading/spelling age by the number of months between pre- and post-test.

Some reports do not use tests which yield r.a’s/s.a’s, and therefore RGs cannot be calculated for them – where this was the case I state ‘Ratio gain: n/a’. For the only exception, see Write Away Together.

## A.2.2 Effect sizes

This is a more statistically based metric. It involves dividing the difference between the average gains made by the experimental group and control/comparison group by a relevant standard deviation, and the result is expressed as a decimal of an s.d. Positive effect sizes show a difference in favour of the experimental group, negative ones a difference in favour of the control/comparison group.

There are various statistics in the literature called effect sizes; the most frequently cited (and the one I use) is called 'Cohen's d', and this is the formula for calculating it:

$$d = \frac{\bar{x}_t - \bar{x}_c}{S_{pooled}}$$

where  $\bar{x}_t$  denotes the average (mean) gain of the treatment (experimental) group,  $\bar{x}_c$  denotes the average (mean) gain of the control/comparison group, and the bottom line stands for a pooled standard deviation. The formula for pooling two s.d's is:

$$S_{pooled} = \sqrt{\frac{(n_t - 1)s_t^2 + (n_c - 1)s_c^2}{n_t + n_c}}$$

where  $n$  denotes a sample size, and  $s^2$  denotes the square of the s.d. of the relevant group.

The top line of the formula can be stated in prose as (average gain of treatment group) – (average gain of control/comparison group), and can be applied equally to r.a's, s.a's, standardised scores and raw scores derived from two appropriately constituted (i.e. sufficiently comparable) groups.

Where problems can arise is with the choice of the appropriate s.d's to pool in the denominator. Having taken advice from several statisticians I have concluded that the appropriate s.d's to use are the post-test s.d's of the experimental and control/ comparison groups. This is because the data of most interest, those representing the population to which one wishes to generalise, arise at that point. Almost all the effect sizes quoted in this report were calculated this way. In many cases this has been made possible by the generosity of scheme providers sharing their data with me.

In some cases where authors of articles calculated the effect sizes they report by a different method (e.g. using pre-test s.d's) I have substituted my own figures. In one case (Inference Training in Sussex) no post-test s.d's were given, so I had to use the pre-test s.d's. In a few cases I did not have the information needed to make a calculation, and have therefore reported the effect sizes given by the authors.

In two cases (Academy of Reading, AcceleRead AcceleWrite in Jersey) I calculated an effect size even in the absence of a control/comparison group. These were both studies which used standardised tests. Where such a test is used, there is always an implicit or 'unseen' control group, the one provided by the standardisation sample. In these circumstances the absence of an explicit control/comparison group, or of its data, can be circumvented, since an effect size can be calculated by using the s.d. (usually 15.0) and mean scores of the standardisation sample; and since the mean scores of the standardisation sample are by definition the same at pre- and post-test, the comparison group term in the top line of the formula reduces to zero, and the formula simplifies to:

(average gain of treatment group in standardised score points)

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15 (or other relevant s.d.)

Effect sizes (however calculated) are much more statistically sophisticated than RGs because they take account of the dispersal of scores (through the s.d.) and of a control/comparison group, preferably an explicit one but sometimes the implicit one provided by the standardisation sample. They normally take no account of the length of time over which an intervention achieved its impact, but Torgesen (2005, p.529) appears to have pioneered a method of taking account of time elapsed when measuring gain using tests that yield standardised scores: 'SS gains per hour of instruction'. He defines this as a 'metric ... calculated by dividing the amount of gain in standard[ised] score units by the number of hours of instruction ... provided, so rate of growth is expressed as the number of standard[ised] score points gained per hour of instruction'. No attempt has been made here to calculate such figures, mainly because the number of hours of instruction is very rarely stated in reports.

Almost all reported effect sizes seem to fall in the range -0.10 to +1.00, which suggests bias against publishing negative findings. The usual rule of thumb for interpreting effect sizes is that those below 0.20 are very small and probably not of educational significance; those between 0.20 and 0.50 are small; those between 0.50 and 0.80 are medium (useful); and those above 0.80 are large – I subdivide these into those between 0.80 and 1.00 (substantial) and those above 1.00 (remarkable).

Wherever it was impossible to calculate any form of effect size (i.e. mainly in one-group studies reporting only r.a./s.a. data) I have stated 'Effect size: n/a'.

### **A.2.3 Statistical significances**

Two forms of statistical significance data would be relevant, where available, namely on the gains of separate groups (difference between pre- and post-test average scores), and on the differences between gains where there was more than one group.

When the gains of separate groups are tested for significance, the fact that children are older by the time of the post-test should be allowed for. Where standardised tests are used, the tables for converting raw scores to standardised scores provide for this automatically. Where r.a./s.a. tests are used, the need to allow for age is routinely ignored (including by me).

Where authors give information on statistical significances, I have cited (selected parts of) it. For quite a few studies I have calculated the significances – again, this was made possible by the generosity of scheme providers. However, in many cases neither was possible, and the importance of the result has to be judged 'by eye' from the RG – which was the case in the majority of studies.

## A.3 Data on evaluated schemes

### A Schemes for reading and spelling at primary level

#### 1 A.R.R.O.W.

##### (1) Bristol

**Main reference:** Lane (2010)

**Research design:** One-group pre-test/post-test study

**Date:** 2008

**Age range:** Y6

**Type of children:** Mixed ability: 'All the children in Y6 in one primary school in Bristol'

**N of experimental group:** 85

**Length of intervention in weeks:** Two

**Tests used:** WORD (Wechsler Objective Reading Dimension)

**Pre- and post-test average r.a's/s.a's in years and months, gains in months of r.a./s.a. (s.d's not stated), and RGs:**

	pre	post	gain	RG
reading accuracy	11:11	13:3	16	32.0
comprehension	10:5	12:3	22	44.0
spelling	11:1	11:9	8	16.0

**Effect sizes:** n/a

**Statistical significances:** Were not stated and could not be calculated

**Starting and ending levels and progress:** At pre-test these children were scoring at about average levels for their age, or even slightly above that in reading accuracy. The RGs show remarkable progress in all three areas, especially in both aspects of reading. By post-test they were scoring well average levels for their age.

## 1 A.R.R.O.W.

### (2) England and Wales

**Main reference:** Lane (2010), unpublished details supplied by Colin Lane

**Research design:** Accumulated data from numerous one-group pre-test/post-test studies

**Date:** 2007–10

**Age range:** Y1–6

**Type of children:** Low attainment

**N of experimental group:** 361 in 27 schools

**Length of intervention in weeks:** Two

**Tests used:** Schonell Graded Word Reading Test, Schonell Spelling Test

**Pre- and post-test average r.a's in years and months (s.a's not stated), gains in months of r.a./s.a. (s.d's not stated), and RGs:**

	pre	post	gain	RG
reading accuracy	8:11	9:7	8	16.0
spelling			6	12.0

**Effect sizes:** n/a

**Statistical significances:** were not stated and could not be calculated

**Starting and ending levels and progress:** Given the wide chronological age- range, the pre-test average for reading implies that many of these children, especially the older ones, were well behind. They made remarkable progress in both reading and spelling in a very short time.

## 2 Academy of Reading®

**Main reference:** Loh and Stanton (2004)

**Research design:** One-group pre-test/post-test study

**Date:** 2003–04

**Age range:** Northern Ireland Y7 (England and Wales Y6)

**Type of children:** Low attainment

**N of experimental group:** 40 in eight schools in five Education and Library Board areas in Northern Ireland (data also reported for three other years, but omitted here because of small Ns or small effect size)

**Length of intervention in weeks:** 20

**Reading test:** NFER-Nelson Progress in English

**Pre- and post-test average ss and gain for reading comprehension in standardised score points (s.d's not stated), statistical significance, and effect size calculated using the s.d. of the standardisation sample (15.0):**

NI year	E&W year	N	pre	post	gain	p	effect size
7	6	40	80.3	89.1	8.8	<0.01	0.59

**Ratio gain:** n/a

**Starting and ending levels and progress:** The average pre-test score was 1.3 s.d's below the national norm, so this group was on average seriously behind. The useful gain shown by the effect size brought the group up to 0.6 of an s.d. below the norm; even so, some would still struggle with the secondary curriculum.

### 3 AcceleRead AcceleWrite

#### (1) Jersey

**Main reference:** Jersey Advisory Service (1993)

**Research design:** One-group pre-test/post-test study

**Date:** 1993

**Age range:** Y3–9 (Ns for separate years not given; average age at outset 10:3)

**Type of children:** Low attainment (r.a. said to be well below c.a. – but see below)

**N of experimental group:** 61 in 15 primary & four secondary schools

**Length of intervention in weeks:** Four

**Tests used:** British Ability Scales

**Average standardised scores for reading accuracy at pre- and post-test and 10-week and 6-month follow-ups, gains from pre-test (s.d.'s not stated), and effect sizes for post-test vs. pre-test only calculated (by GB) using s.d.'s of standardisation samples:**

	Average score	Gain	Effect size
pre	92.4		
post	100.7	8.3	0.55
ten-week follow-up	103.0	10.6	
six-month follow-up	105.7	13.3	

**Ratio gains:** n/a

**Statistical significances:** Were not stated and could not be calculated

**Starting and ending levels and progress:** Although the original report says the children's r.a.'s were 'well below' c.a., the pre-test standardised score was only about ½ of an s.d. below the national norm. The effect size shows a useful gain. By post-test the standardised score was at the national norm, and at follow-ups showed continuing improvements beyond that; these pupils should therefore have been equipped to cope with the curriculum.

**Follow-ups:** See above

### 3 AcceleRead AcceleWrite

(2) Devon

**Main reference:** Unpublished data supplied by Martin Miles

**Research design:** One-group pre-test/post-test study

**Date:** 2002

**Age range:** 'Older KS2'

**Type of children:** Low attainment ('identified as experiencing difficulties with reading and/or spelling')

**N of experimental group:** 30

**Length of intervention in weeks:** Four

**Tests used:** British Ability Scales Word Reading and Spelling

**Pre- and post-test average r.a's and s.a's and s.d's:** Not stated

**Gains in months of r.a./s.a. (s.d's not stated) and RGs:**

	gain	RG
reading accuracy	16.1	16.1
spelling	9.8	9.8

**Effect sizes:** n/a

**Statistical significances:** Were not stated and could not be calculated

**Starting and ending levels and progress:** Without pre- or post-test data it is impossible to characterise the starting and ending levels. However, the RGs show remarkable progress.

### 3 AcceleRead AcceleWrite

#### (3) Wiltshire

**Main reference:** Unpublished data supplied by Sarah Couzens

**Research design:** One-group pre-test/post-test study

**Date:** 2005–06

**Age range:** Y3–6

**Type of children:** Low attainment

**N of experimental group:** 149 (N of schools not stated)

**Length of intervention in weeks:** Four

**Tests used:** (Reading) NFER Group test; (spelling) NFER

**Pre- and post-test average r.a's/s.a's and s.d's:** Not stated

**Gains in months of r.a./s.a. (s.d's not stated), and RGs:**

	gain	RG
reading comprehension	7.7	7.7
spelling	6.2	6.2

**Effect sizes:** n/a

**Statistical significances:** Were not stated and could not be calculated

**Starting and ending levels and progress:** Without pre- or post-test data it is impossible to characterise the starting and ending levels. However, the RGs show remarkable progress.

#### 4 Better Reading and Writing Partners

**Main reference:** Unpublished data supplied by Tony Whatmuff

**Research design:** One-group pre-test/post-test study

**Date:** 2009–11

**Age range:** Y1–6

**Type of children:** Low attainment

**N of experimental group:** 798 (for cohorts see below) in an unknown number of schools in Leicester

**Average length of intervention in weeks:** (2009–10) 14.4; (2010–11) 14.8

**Reading test:** NFER

**Pre- and post-test average r.a's in years and months, gain in months of r.a., s.d's and RG:**

	N	pre		post		gain		RG
		ave.	(s.d.)	ave.	(s.d.)	ave.	(s.d.)	
2009–10	376	6:0	(1:5)	7:5	(1:6)	16.6	(11.1)	5.0
2010–11	422	6:1	(1:1)	7:3	(1:4)	14.1	(9.5)	4.1

**Effect sizes:** n/a

**Statistical significance:**  $p < 0.001$  in both cases

**Starting and ending levels and progress:** Given the wide age range, the average starting r.a's show that many of these children were well behind. The RGs show remarkable progress in reading accuracy, and most if not all of the KS1 children in these groups would have caught up by the end, but many of the KS2 children would still be well behind and need ongoing support.

## 5 Better Reading Partnership

### (1) Durham

**Main reference:** Unpublished data supplied by Ann Foster

**Research design:** One-group pre-test/post-test study

**Date:** 1999–2001

**Age range:** Y1–5

**Type of children:** Low attainment

**N of experimental group:** 234 (for year groups, see below)

**Length of intervention in weeks:** Ten (2.5 months used in calculating RGs)

**Reading tests:** (Y1–2) Neale Individual Reading Analysis; (Y3–5) Suffolk, first edition

**Year groups, Ns, pre- and post-test and 3- and 12-month follow-up r.a's in years and months, gains since previous test in months of r.a. (s.d's not stated), and RGs post vs pre:**

Age	N	Pre	Post	Gain	RG	3-month follow-up	Gain	12-month follow-up	Gain
Y1 acc	39	6:0	7:6	18	7.2	7:7	1	8:11	16
comp	34	6:6	7:5	11	4.4	8:0	7	8:4	4
Y2 acc	57	6:6	8:0	18	7.2	7:11	-1	8:9	10
comp	46	6:2	8:1	23	9.2	8:4	3	8:11	7
Y3 comp	48	7:2	7:10	8	3.2	8:0	2	8:8	8
Y4 comp	39	7:6	8:1	7	2.8	8:4	3	8:9	5
Y5 comp	51	9:0	9:5	5	2.0	9:6	1	10:3	9

**Effect sizes:** n/a

**Statistical significances:** Were not stated and could not be calculated

**Starting and ending levels and progress:** The Y1–2 groups were not yet functionally literate at the start but made such remarkable progress that by the post-test they had r.a's above c.a. In the next three months they slipped back a little, relatively, in reading accuracy while at least sustaining the gains in comprehension, but one year on still had r.a's above c.a. The other three year groups were all functionally illiterate at the start, and even 12 months on only Y5 had progressed enough to be considered semi-literate. These were all presumably the lowest performers in their years, and the very slow progress in most respects in the months after the intervention illustrates the difficulty of permanently boosting the attainment of such groups.

**Follow-ups:** See above

## 5 Better Reading Partnership

### (2) Nottinghamshire

**Main reference:** Unpublished data supplied by Karen Hanson

**Research design:** Two one-group pre-test/post-test studies

**Dates:** 2004–05, 2005–06

**Age range:** Y2–6

**Type of children:** Low attainment

**N of experimental group:** (2004–05) 77; (2005–06) 65

**Length of intervention in weeks:** 10 (2.5 months used in calculating RGs)

**Reading test:** Mainly Salford

**Pre- and post-test average r.a's and s.d's:** Not stated

**Gains in reading comprehension in months of r.a. (s.d's not stated), and RGs:**

	<b>N</b>	<b>Gain</b>	<b>RG</b>
2004–05	77	9.6	3.9
2005–06	65	14.1	5.6

**Effect sizes:** n/a

**Statistical significances:** Were not stated and could not be calculated

**Starting and ending levels and progress:** Without pre- or post-test data it is impossible to characterise the starting and ending levels. However, the RGs show substantial progress (2004–05 cohort) or remarkable progress (2005–06 cohort).

## 5 Better Reading Partnership

### (3) Tameside

**Main reference:** Unpublished data supplied by Gill Cartwright

**Research design:** One-group pre-test/post-test study

**Date:** 2009/10

**Age range:** Y1–6

**Type of children:** Low attainment

**N of experimental group:** 185 in 15 schools in Tameside

**Length of intervention in weeks:** Ten (2.5 months used in calculating RGs)

**Reading test:** Salford

**Pre- and post-test average r.a's and s.d's:** Not stated

**Gains in months of r.a. (s.d's not stated) and RGs:**

Year group	Number of children	Average gain (months of r.a.)	RG
1	4	24.7	9.9
2	57	17.1	6.8
3	30	10.9	4.4
4	35	11.6	4.7
5	36	13.5	5.4
6	23	16.1	6.4
Total	185	14.4	5.7

**Effect sizes:** n/a

**Statistical significances:** Were not stated and could not be calculated

**Starting and ending levels and progress:** Without pre- and post-test data it is impossible to characterise the starting and ending levels. However, all the RGs show remarkable progress in comprehension.

## 6 Catch Up Literacy

### (1) The Pilot Study

**Main reference:** Clipson-Boyles (2000)

**Research design:** Partly a one-group pre-test/post-test study, partly a matched-groups three-group quasi-experiment

**Date:** September–December 1997

**Age range:** Y3

**Type of children:** Low attainment (level 1 in reading in KS1 test)

**N of experimental group:** 74; 17 in sub-sample matched to comparison and alternative treatment groups

**N of alternative treatment group:** 14

**Nature of alternative treatment:** ‘Teachers were asked to spend time equivalent to Catch Up with selected pupils.’

**N of comparison group:** 17

**Equivalence of experimental sub-sample with AT and comparison groups:** Three of the experimental schools were selected, then matched as closely as possible with two other sets of three schools; then pupils in all three groups of schools were chosen by the same method (six pupils in each school who had achieved Level 1 in reading in KS1 test)

**Length of intervention in weeks:** Ten

**Reading test:** Hodder & Stoughton Literacy Baseline

**Pre- and post-test average scores, gains in reading accuracy and s.d.’s, all in months of r.a., RGs, and effect sizes calculated by dividing differences in gain by pooled post-test s.d.’s of matched experimental group/matched time group and comparison group:**

	pre-test		post-test		gain		RG	effect
	ave. size	(s.d.)	ave.	(s.d.)	ave.	(s.d.)		
experimentals – all	78.3	(6.0)	84.8	(7.5)	6.5	(5.3)	2.6	*
in matched schools	79.6	(4.3)	88.2	(6.2)	8.6	(5.9)	3.4	1.11
matched time group	77.1	(4.5)	80.6	(8.2)	3.5	(5.4)	1.4	0.37
comparison group	81.0	(9.6)	82.1	(7.7)	1.1	(6.5)	0.4	

\* This effect size is not reported because it would be based on an unmatched comparison group

**Statistical significances:** Were not stated and could not be calculated

**Starting and ending levels and progress:** All pre-test average scores were well below national norms, as were the post-test averages for the matched time and comparison groups. The Catch Up Literacy matched sample made substantial progress, and their post-test average was 0.6 of an s.d. below the norm. Their remarkable effect size confirms how much more progress they had made than the comparison group. The matched time group made just over standard progress, and the comparison group fell even further behind.

## 6 Catch Up Literacy

### (2) National data

**Main reference:** Holmes *et al.* (2011)

**Research design:** Multiple one-group pre-test/post-test studies

**Date:** 2002–10

**Age range:** Y2–9 (average age at beginning: 8:6)

**Type of children:** Low attainment

**N of experimental group:** 5,479 in 23 LAs across England and Wales

**Average length of intervention in weeks:** 32.8 (7.57 months used in calculating RG)

**Reading test:** Salford

**Pre- and post-test average r.a.'s, gains and s.d.'s, all in months, and RG:**

	pre	post	gain	RG
ave.	69.6	87.1	17.5	2.3
(s.d.)	(17.1)	(18.4)	(10.6)	

N.B. The RG shown was calculated by dividing the average gain by the average interval between pre- and post-test. The authors report an RG of 2.5, calculated as the average of children's individual RGs. The difference appears to be due to an accumulation of rounding errors in the authors' method.

**Effect size:** n/a

**Statistical significance:**  $p < 0.001$

**Starting and ending levels and progress:** Given that the average starting c.a. was 90.2 months, these children were on average 20.6 months behind at that point. At the end their average c.a. was 97.8 months, so they had reduced the gap to 10.7 months. The RG for reading comprehension confirms the useful progress.

**Follow-up:** A sub-sample of 185 children in Norfolk and Rhondda Cynon Taf LAs who had received Catch Up Literacy in 2003 at age seven were assessed again seven years later using the Salford test; 89% of them achieved the test's ceiling r.a. of 10:2.

## 7 Cued Spelling

**Main reference:** Unpublished data supplied by Sue Derrington

**Research design:** One-group pre-test/post-test study

**Date:** 2004–05

**Age range:** Y2–6

**Type of children:** SEN

**N of experimental group:** 50 in 15 schools in Bristol

**Length of intervention in weeks:** Not stated, and varied between schools, but average appears to have been about eight

**Tests used:** NFER Individual Reading Analysis (KS1), Neale (second UK edition, accuracy and comprehension) (KS2); Vernon Spelling Test (both)

**Pre- and post-test average r.a's/s.a's and s.d's:** Not stated

**Gains in months of r.a./s.a. (s.d's not stated) and RGs:**

	<b>Gain</b>	<b>RG</b>
reading accuracy	4.6	2.1
reading comprehension	6.7	3.1
spelling	6.0	3.1

**Effect sizes:** n/a

**Statistical significances:** Were not stated and could not be calculated

**Starting and ending levels and progress:** Without pre- or post-test data it is impossible to characterise the starting and ending levels. However, the RGs show useful progress.

## 8 Easyread

**Main reference:** Unpublished data supplied by David Messer and Gilly Nash of the Open University, who were conducting an independent evaluation

**Research design:** RCT

**Date:** 2011–12

**Age range:** (at pre-test) 7:1–8:10, average 7:7

**Type of children:** SEN (school action, school action plus or statemented)

**N of experimental group:** 52 in eight schools in Greater London

**N of control group:** 43 in same schools

**Equivalence of groups:** randomised within schools; groups did not differ significantly at pre-test, on main test or two others

**Length of intervention in weeks:** 8–16

**Reading test:** Test of Word Reading Efficiency, form A at pre-test, form B at post-test

**Pre- and post-test average ss, gains in ss points, s.d's, and effect size:**

Group	N	Pre-test		Post-test		Gain		Effect size
		ave.	(s.d.)	ave.	(s.d.)	ave.	(s.d.)	
Exps	52	89	(12)	95	(11)	6	(6)	0.68
Conts	43	93	(13)	91	(13)	-2	(7)	

**Statistical significances:** Experimental group's gain was significantly higher than control group's gain ( $p < 0.001$ )

**Starting and ending levels and progress:** Both group's starting levels were below average, the experimental group being slightly further behind than the control group. By the end the experimental group's average standardised score had moved much closer to the national norm, while the control group had lost ground. The useful effect size shows better progress for the experimental group.

**Follow-up:** In school year 2012–13 the control group will receive the intervention, and further data-gathering is planned.

## 9 ENABLE (Enhancing Attainment in Basic Literacy)

### (1) ENABLE – ONE-TO-ONE

**Main references:** For a description of the programme, Bowen and Yeomans (2002); for data analysed below, Bowen (2003)

**Research design:** One-group pre-test/post-test study

**Date:** 2002

**Age range:** Y2

**Type of children:** Children identified as having literacy difficulties by the member of teaching staff at each school nominated as ENABLE Coordinator

**N of experimental group:** 100 in 15 schools

**Length of intervention in weeks:** Eight

**Tests used:** Salford Sentence Reading Test, Schonell Spelling Test

**Pre- and post-test average r.a's/s.a's and s.d's:** Not stated

**Gains in months of r.a./s.a., and RGs:**

	Gain	RG
Reading comprehension	6	3.0
Spelling	7	3.5

**Effect sizes:** n/a

**Statistical significances:** Were not stated and could not be calculated

**Starting and ending levels and progress:** Without pre- or post-test data it is impossible to characterise the starting and ending levels. However, the RGs show substantial progress.

## 9 ENABLE (Enhancing Attainment in Basic Literacy)

### (2) ENABLE-Plus

**Main reference:** Bowen and Yeomans (2002)

**Research design:** One-group pre-test/post-test study

**Date:** 2000–01

**Age range:** Y3–5 (7:0–9:0 at outset)

**Type of children:** Low attainment – one had Statement of Special Educational Need; all others were receiving School Action under the Code of Practice

**N of experimental group:** 29, all in one primary school (also 14 in another primary school, not analysed because of small sample)

**Length of intervention in weeks:** 22

**Reading test:** BASWRT

**Pre- and post-test average r.a's in years and months and gain in reading accuracy in months of r.a. (s.d's not stated), and RG:**

Pre	Post	Gain	RG
5:10	6:9	11	2.2

**Effect size:** n/a

**Statistical significances:** Were not stated and could not be calculated

**Starting and ending levels and progress:** These Y3–5 pupils, all with serious difficulties, were functionally illiterate both pre and post, but made useful progress.

### 10 FFT Wave 3

**Main references:** Canning (2004, 2009)

**Research design:** Two one-group pre-test/post-test studies

**Dates:** 2004, 2008

**Age ranges:** (2004) Y1–3; (2008) Y1–5

**Type of children:** (2004) SEN with very low attainment – working at P6 to 1C  
(2008) very low attainment

**Ns of experimental groups:** (2004) 67 in about 30 schools  
(2008) 255 in nine LAs

**Length of intervention in weeks:** Ten

**Reading assessment:** A range of early reading and writing assessments was used. The one from which an impact measure could be derived, indirectly, was Reading Recovery book bands. All children in England who enter Reading Recovery are now routinely assessed on both RR book bands and the BASWRT. Nelson Thornes publishers have been able to use this information to correlate book bands with BASWRT reading ages, and have published a table of equivalences in their PM Benchmark Kit. These equivalences have been used in this analysis.

**Pre- and post-test average RR book bands and r.a's in years and months, gains in book bands and in reading accuracy in months of r.a., and RGs:**

Cohort		pre	post	gain	RG
2004	book bands	2.2	7.9	5.7	
	r.a.	5:1	5:8	7	2.8
2008	book bands	3.8	13.7	9.9	
	r.a.	5:5	6:5	12	4.8

**Effect sizes:** n/a

**Statistical significances:** Were not stated and could not be calculated

**Starting and ending levels and progress:** Both pre- and post-test average scores show these pupils were not yet functionally literate. For all those above Y1 this means they were well behind. The 2004 group made useful progress, and the 2008 group substantial progress, but in both cases this would need to be sustained by further quality teaching.

## 11 Inference Training

### (1) Sussex

**Main reference:** Yuill and Oakhill (1988)

**Research design:** Matched groups four-group quasi-experiment

**Date:** Autumn 1985–Spring 1986

**Age range:** Y3

**Type of children:** Mixed-ability

**N of experimental groups:** (1) 13 less skilled comprehenders, in five schools  
(2) 13 skilled comprehenders, in same five schools

**Ns of alternative treatment (AT) groups:** (AT1) 14; (AT2) 12, all in same 5 schools

**Nature of alternative treatments:** (AT1) comprehension exercises  
(AT2) rapid decoding practice

**Equivalence of groups:** Groups matched on age, reading accuracy and vocabulary;  
experimental groups deliberately differentiated on reading comprehension

**N of control group:** No no-intervention control group

**Length of intervention in weeks:** Four

**Reading test:** Neale, form C at pre-test, form B at post-test, thus avoiding specific practice effects over the short interval

**Pre- and post-test average r.a's and pre-test s.d's in years and months, gains in months of r.a. (post-test and gain s.d's not given), and RGs:**

Aspect of Neale	group	pre-test ave.		post-test (s.d.)	gain ave.	RG
accuracy	exps 1	8:2	(0:6)	8:6	4.3	4.3
	exps 2	8:3	(0:6)	8:7	3.9	3.9
	AT1	8:5	(1:2)	8:10	5.0	5.0
	AT2	8:4	(0:5)	8:7	3.0	3.0
compre.	exps 1	7:3	(0:3)	8:8	17.4	17.4
	exps 2	8:8	(0:8)	9:4	5.9	5.9
	AT1	8:1	(1:0)	8:11	9.6	9.6
	AT2	8:1	(0:7)	8:9	8.2	8.2

**Effect sizes:** Were not stated and could not be calculated reliably because only pre-test s.d's were available and it is clear from inspecting the variances that they were significantly different

**Statistical significances:** Poor comprehenders (exps 1) made significantly more progress than good comprehenders (exps 2) ( $p < 0.001$ ), and the combined inference training groups (exps 1+2) made significantly more progress than the rapid decoding group (AT2) ( $p < 0.01$ ).

**Starting and ending levels and progress:** All pre-test average scores were in the semi-literate range and, except for the deliberate separation of poor and good comprehenders which shows up in the comprehension scores for the two experimental groups, close to c.a. By post-test, one month later, all average scores were well above c.a. The RGs for accuracy show substantial or remarkable progress; those for comprehension show remarkable progress, especially by the poor comprehenders (exps 1).

## 11 Inference Training

### (2) Glasgow

**Main reference:** McGee and Johnson (2003)

**Research design:** Four-group RCT

**Date:** c.2001

**Age range:** 6:6–9:11 at pre-test

**Type of children:** skilled and less skilled comprehenders; all had reading accuracy age equal to or above c.a.; skilled group had reading comprehension age also equal to or above c.a., but less skilled group had reading comprehension age at least 6 months below c.a.

**Ns of experimental groups:** Ten in each, all from one school

**Ns of alternative treatment groups:** Ten in each, all from same school

**Nature of alternative treatment:** Comprehension exercises

**Equivalence of groups:** Randomly allocated within skilled and less skilled groups; no statistically significant difference at pre-test on reading accuracy

**N of control group:** No no-intervention control group

**Length of intervention in weeks:** Three

**Reading tests:** Neale (1989), Form 2 at pre-test, Form 1 at post-test

**Pre- and post-test average comprehension r.a's in years and months, gains in months (s.d's not stated) and RGs:**

Group		N	pre	post	gain	RG
less skilled	exp	10	7:6	9:2	20	28.7
less skilled	AT	10	7:8	8:6	10	14.3
skilled	exp	10	9:1	9:10	9	12.9
skilled	AT	10	9:4	10:1	9	12.9

**Note:** Some data not stated in article but deduced from data given and figures

**Effect sizes:** n/a

**Statistical significances:** Were not stated and could not be calculated

**Starting and ending levels and progress:** Pre-test scores confirm that skilled groups were at age-appropriate level, while less skilled groups were well behind. All groups made remarkable gains, but as intended the less skilled experimental group made the most progress, and reached an age-appropriate level.

## 11 Inference Training

### (3) Leicester

**Main reference:** Unpublished data supplied by Joanna Lockley (2006) and Tony Whatmuff (2009–11)

**Research design:** Two one-group pre-test/post-test studies

**Dates:** 2006, 2009–11

**Age ranges:** (2006) Y5–6; (2009–11) KS2

**Type of children:** Low attainment

**Ns of experimental groups:** (2006) 57 in six schools; (2009–11) 204 (N of schools not stated)

**Length of intervention in weeks:** (2006) 6; (2009–11) 6–9, average 7.2 (1.7 months used in calculating RG)

**Reading test:** Neale

**Pre- and post-test average scores and s.d.'s:** Not stated

**Average gains in months of r.a. (s.d.'s not stated) and RGs:**

cohort		gain	RG
2006	accuracy	9.7	6.5
	comprehension	13.5	9.0
2009–11	comprehension	12.3	7.3

**Effect sizes:** n/a

**Statistical significances:** Were not stated and could not be calculated

**Starting and ending levels and progress:** Without pre- or post-test data it is impossible to characterise the starting and ending levels. However, all the RGs show remarkable progress.

## 12 Lexia

### (1) Norfolk

**Main reference:** Worsley (2003)

**Research design:** One-group pre-test/post-test study

**Date:** 2003

**Age range:** Y2–3

**Type of children:** Low attainment (most had r.a.'s two years or more below c.a.)

**N of experimental group:** 37 in 13 schools

**Length of intervention in weeks:** Ten

**Tests used:** Salford Sentence Reading Test, revised

**Pre- and post-test average r.a.'s in years and months, gain in months of r.a. (s.d.'s not stated), and RG:**

	pre	post	gain	RG
reading comprehension	5:1	5:7.4	6.4	2.6

**Effect sizes:** n/a

**Statistical significance:** Was not stated and could not be calculated

**Starting and ending levels and progress:** The pre- and post-test average scores were all within the functionally illiterate range. There was useful progress in comprehension. These children would need systematic further intervention.

## 12 Lexia

(2) York

**Main reference:** Wilson and Clarke (2005)

**Research design:** One-group pre-test/post-test study

**Date:** 2005

**Age range:** Y2–6

**Type of children:** Most on SEN register at School Action or School Action Plus

**N of experimental group:** 42 in seven schools

**Length of intervention in weeks:** Ten

**Tests used:** Salford Sentence Reading Test, revised; SPAR Spelling Test

**Pre- and post-test average r.a's/s.a's in years and months, gains in months of r.a./s.a. (s.d's not stated), and RGs:**

	pre	post	gain	RG
reading comprehension	6:7	7:3	8	3.0
spelling	7:11	8:4	5	2.0

**Effect sizes:** n/a

**Statistical significances:** Were not stated and could not be calculated

**Starting and ending levels and progress:** The pre-test average score for comprehension was in the functionally illiterate range, while the pre-test average for spelling was in the semi-literate range – it is very unusual for s.a. to be above r.a. but no explanation is offered in the report. For the upper primary pupils in the sample this means they were well behind. There was useful progress in both comprehension and spelling, but post-test scores were all in the semi-literate range and these pupils would need further structured support.

## 12 Lexia

### (3) Cumbria

**Main reference:** Walker (2009)

**Research design:** One-group pre-test/post-test study

**Date:** 2008–09

**Age range:** Y1–8

**Type of children:** Low attainment

**N of experimental group:** 78 in 11 schools

**Length of intervention in weeks:** Ten

**Tests used:** (Reading) Burt; (spelling) Schonell

**Pre- and post-test average r.a's/s.a's and s.d's:** Not stated

**Gains in months of r.a./s.a. (s.d's not stated), and RGs:**

	gain	RG
reading accuracy	7.25	2.9
spelling	6.10	2.4

**Effect sizes:** n/a

**Statistical significances:** Were not stated and could not be calculated

**Starting and ending levels and progress:** Without pre- or post-test data it is impossible to characterise the starting and ending levels. However, the RGs show useful progress in both aspects.

## 12 Lexia

### (4) Darlington

**Main reference:** Walker (2010)

**Research design:** One-group pre-test/post-test study

**Date:** 2010

**Age range:** Y2–6

**Type of children:** Low attainment

**N of experimental group:** 65 in ten schools

**Length of intervention in weeks:** Eight

**Reading tests used:** Various, including Burt, Salford, Suffolk

**Pre- and post-test average r.a's and s.d's:** Not stated

**Gain in months of r.a. (s.d. not stated), and RG:**

gain	RG
5.45	2.7

**Effect size:** n/a

**Statistical significance:** Was not stated and could not be calculated

**Starting and ending levels and progress:** Without pre- or post-test data it is impossible to characterise the starting and ending levels. However, the RG shows useful progress.

### 13 Paired Reading

**Main reference:** Topping and Lindsay (1992)

**Research design:** Mainly a set of one-group pre-test/post-test studies, but partly a matched-groups two-group quasi-experiment because some experimental groups had matched no-treatment comparison groups

**Date:** 1984–87

**Age range:** Not stated but known to be across full compulsory-education age range (Y1–11); also known to be mainly primary and therefore included here and not under KS3

**Type of children:** Mixed ability

**N of experimental group:** 2,372 in 155 projects in 71 schools in Kirklees for main accuracy measure – for other N, see below

**N of comparison group:** 446 in 37 projects for main accuracy measure – for other N, see below

**Equivalence of groups:** Method not stated, but thought to be matched groups

**N of alternative treatment group:** Some projects had alternative treatment groups, but too numerous and disparate to report here

**Nature of alternative treatments:** Impractical to summarise

**Average length of intervention in weeks:** Nine

**Reading tests:** Many, including Burt, Holborn, Neale, New Macmillan Reading Analysis, Primary, Salford, Schonell, Standard (Daniels & Diack) 1 & 12, Widespan

**Pre- and post-test average scores, gains and s.d.'s:** Not given in principal original report because too numerous

Ratio gains:	accuracy		comprehension	
	N	RG	N	RG
all experimentals	2,372	3.3	690	4.3
experimentals in comparison-group projects	580	3.4	170	4.6
comps in comparison-group projects	446	2.0	159	2.5

**Effect sizes as stated by authors, calculated using s.d. of comparison group gain:**

	accuracy	comprehension
N of projects (N of children not given)	34	12
effect size	0.87	0.77

However, mean effect sizes for published studies in the literature (12 controlled studies) are 2.12 for reading accuracy and 1.63 for comprehension (Topping *et al.*, 2012, in press).

**Statistical significances:** All RGs were highly statistically significant ( $p < 0.001$ ) for both accuracy and comprehension (Keith Topping, personal communication, 10 August 1998)

**Starting and ending levels and progress:** Without pre- or post-test data it is impossible to characterise the starting and ending levels. However, the large effect sizes and the RGs show substantial progress for the experimental groups in reading accuracy and remarkable progress in comprehension, while the RGs for the comparison groups show useful progress.

**Follow-up:** The Kirklees project provided follow-up data on 272 children in 17 projects. In follow-ups at less than 17 weeks after the end of the interventions, 102 children in seven projects averaged RGs during the follow-up period of 2.0 for accuracy and 2.3 for comprehension. In follow-ups at more than 17 weeks, 170 children in ten projects averaged RGs during the follow-up period of 1.2 for accuracy and 1.4 for comprehension. This suggests that children continued to improve for a while after the intervention, and then maintained their gains with standard progress.

## 14 Phono-Graphix®

**Main references:** Derrington (2001a, b) and unpublished data supplied by Sue Derrington

**Research design:** Two one-group pre-test/post-test studies

**Date:** 2000–02

**Age range:** Y1–6

**Type of children:** Low attainment

**N of experimental group:** 215 in 13 schools – for year-groups, see below

**Length of intervention in weeks:**

Y1 26 (six months used in calculating RG)

Y2–6 12 (three months used in calculating RGs)

**Tests:** (Y1) Carver WRAPS tests

(Y2–6) (reading) Neale Analysis and Individual Analysis; (spelling) not stated

**Pre- and post-test average r.a's/s.a's in years and months, gains in months of r.a./s.a. (s.d's and some other data not stated), and RGs:**

			Reading accuracy				Reading comprehension			
Age	Date	N	Pre	Post	Gain	RG	Pre	Post	Gain	RG
Y1	2000–01	141			13	2.2				
Y2–6	2001–02	74	6:4	8:5	25	8.3	7:1	9:0	23	7.7
			Spelling							
Age	Date	N	Pre	Post	Gain	RG				
Y2–6	2001–02	60	6:9	7:7	10	3.3				

(subset of 2001–02 reading group above)

**Effect sizes:** n/a

**Statistical significances:** Were not stated and could not be calculated

**Starting and ending levels and progress:** Without pre- or post-test data it is impossible to characterise the starting and ending levels for the Y1 group; however, they made useful progress in reading accuracy.

For the Y2–6 group, all pre-test average scores were in the functionally illiterate range. Given that these groups included Y6 children, some were well behind. This group made remarkable progress in reading accuracy and comprehension, and substantial progress in spelling, so that by post-test all their scores were in the semi-literate range. However, many would still need further structured support, especially those who would otherwise struggle with the secondary curriculum.

**15 Read Write Inc.**

**(1) Bristol**

**Main reference:** Unpublished data supplied by Sue Derrington

**Research design:** One-group pre-test/post-test study

**Date:** 2004–05

**Age range:** Y2–6

**Type of children:** SEN

**N of experimental group:** 117 in 12 schools

**Length of intervention in weeks:** Not stated, and varied between schools, but average appears to have been about eight

**Tests used:** NFER Individual Reading Analysis (KS1), Neale (second UK edition, accuracy and comprehension) (KS2)

**Pre- and post-test average r.a's/s.a's, gains and s.d's:** Not stated

<b>Ratio gains:</b>	
reading accuracy	2.3
reading comprehension	2.6

**Effect sizes:** n/a

**Statistical significances:** Were not stated and could not be calculated

**Starting and ending levels and progress:** Absence of pre- and post-test scores does not permit characterisation of starting and ending levels. The pupils made useful progress in reading accuracy and comprehension.

**15 Read Write Inc.**

**(2) Haringey**

**Main reference:** Unpublished data supplied by Christa Rippon via Jean Gross

**Research design:** One one-group pre-test/post-test studies

**Date:** 2003–04

**Age range:** Y5–6

**Type of children:** Low attainment; some had r.a. several years below c.a.

**Ns of experimental groups:** 30 in seven schools

**Length of intervention in weeks:** 20 (five months used in calculating RG)

**Reading tests:** Neale

**Pre- and post-test average accuracy r.a's in years and months, gains in months of r.a. (s.d's not stated), and RGs:**

pre	post	gain	RG
6:3	7:10	19	3.8

**Effect size:** n/a

**Statistical significance:** Was not stated and could not be calculated

**Starting and ending levels and progress:** Pre-test average score was in the beginner reader range, and many of the pupils were several years behind. However, they made a substantial gain, and their post-test average score was in the semi-literate range. They would still need further structured support.

## 16 The Reading Intervention Programme

### (1) (The original) Cumbria Reading with Phonology Project

**Main reference:** Hatcher, Hulme and Ellis (1994)

**Research design:** Four-group matched-groups quasi-experiment

**Date:** September 1989–May 1990

**Age range:** Y2 ('third year of infant schooling')

**Type of children:** Low attainment (reading quotient, r.a./c.a. x 100, on Carver test less than 86, but those with reading quotient less than 71 and percentile rank below 25 on Raven's Coloured Progressive Matrices (1965) excluded)

**N of experimental group:** 32 (received both reading programme and phonological training)

**Ns of alternative treatment groups:** (AT1) 31; (AT2) 30

**Nature of alternative treatments:** (AT1) reading programme only (similar to Reading Recovery as then taught, i.e. without phonology, hence the contrast with AT2 and the experimental condition); (AT2) phonology only (phonological training)

**N of no-treatment comparison group:** 31

**Equivalence of groups:** Groups matched on reading ability; other factors (IQ, age) treated as co-variates in analysis of post-test differences

**Length of intervention in weeks:** 20 (but 25 weeks between start and end and 30 weeks between pre- and post-test; seven months used in calculating RGs)

**Tests used:** (reading) Neale revised form 1 (also BASWRT form A, and Schonell Graded Word Spelling Test, but impact measures were too small to report here)

**Pre- and post-test and nine-month follow-up average r.a's/s.a's and s.d's in years and decimal years:**

		<b>R&amp;P (N = 32)</b>	<b>Reading (N = 31)</b>	<b>Phonology (N = 30)</b>	<b>No treatment (N = 31)</b>
<b>Neale</b>	<b>pre</b>	5.10 (0.21)	5.04 (0.19)	5.18 (0.43)	5.11 (0.30)
<b>acc</b>	<b>post</b>	6.13 (1.00)	5.78 (0.54)	5.81 (0.90)	5.66 (0.80)
	<b>follow-up</b>	6.77 (1.58)	6.22 (0.82)	6.31 (1.03)	6.25 (1.15)
<b>Neale</b>	<b>pre</b>	5.29 (0.30)	5.32 (0.34)	5.43 (0.50)	5.41 (0.49)
<b>comp</b>	<b>post</b>	6.39 (0.92)	6.00 (0.97)	5.94 (0.80)	5.88 (0.73)
	<b>follow-up</b>	6.99 (1.28)	6.47 (0.94)	6.46 (1.11)	6.35 (0.97)

**Gains (in months of r.a./s.a.), and effect sizes calculated as pre/post differences in gain relative to control group divided by pooled post-test s.d's of no-treatment group and relevant experimental group:**

test	group	gain (months)	effect size
<b>Neale</b>	exps	12.4	0.54
<b>acc</b>	AT1	8.9	0.29
	AT2	7.6	0.10
	no treatment	6.6	
<b>Neale</b>	exps	13.2	0.77
<b>comp</b>	AT1	8.2	0.26
	AT2	6.1	0.06
	no treatment	5.6	

**Statistical significances:** On both post-test measures, experimentals' gains were significantly better than other three groups'; those groups' gains did not differ significantly.

**Starting and ending levels and progress:** At pre-test all average scores were in the functionally illiterate range, and well below c.a. Judging by the RGs, the experimental group made modest progress, the other groups at best only standard progress, whereas the effect sizes for the experimental group showed useful gains relative to the control group. At post-test all average scores were still in the functionally illiterate range, but the experimental group's scores were much closer to c.a.

**Follow-up:** Experimentals made no further relative gain between post-test and follow-up, but maintained the advantage gained during the intervention. However, inspection of the follow-up means reveals that the absolute gains over post-test were slight – all groups, including the experimentals, were making less than standard progress.

## 16 The Reading Intervention Programme

### (2) General use in Cumbria after the original project

**Main reference:** Hatcher (2000)

**Research design:** One-group pre-test/post-test study

**Date:** 1994–98

**Age range:** Y2–10; data not given separately by year groups, therefore included here and not under KS3

**Type of children:** Low attainment

**N of experimental group:** 427, including 73 statemented (see [chapter 4](#))

**Length of intervention in weeks:** 12

**Tests used:** (Reading) Burt, 1974 revision; (spelling) Schonell

**Pre- and post-test average r.a's/s.a's and s.d's:** Not stated

**Gain in months of r.a./s.a. (s.d's not stated), and RGs:**

	Gain	RG
reading accuracy	6.1	2.0
spelling	7.9	2.6

**Effect sizes:** n/a

**Statistical significances:** Were not stated and could not be calculated

**Starting and ending levels and progress:** Absence of pre- and post-test scores does not permit characterisation of starting and ending levels. The pupils made useful gains.

## 16 The Reading Intervention Programme

### (3) North Yorkshire

**Main reference:** Unpublished data supplied by Christine Noyes

**Research design:** Five one-group pre-test/post-test studies

**Date:** 2005–10

**Age range:** Primary

**Type of children:** Low attainment

**N of experimental group:** 720 in five cohorts (see below)

**Length of intervention in weeks:** 12

**Reading test:** Burt (1974 revision)

**Pre- and post-test average r.a's and s.d's:** Not stated

**Average gains in months of r.a. (s.d's not stated) and RGs:**

	<b>N</b>	<b>Gain</b>	<b>RG</b>
2005/06	108	8.1	3.2
2006/07	194	9.9	4.0
2007/08	63	8.1	3.3
2008/09	106	8.1	3.3
2009/10	249	8.9	3.5

**Effect sizes:** n/a

**Statistical significances:** Were not stated and could not be calculated

**Starting and ending levels and progress:** Without pre- and post-test data it is impossible to characterise the starting and ending levels. However, all the RGs show substantial progress.

## 17 Reading Recovery

### (1) London and Surrey

N.B. In all three previous editions data on an alternative treatment called variously Phonological Intervention or Phonological Training were presented in addition to those on RR. These data are not reproduced here because (a) the alternative treatment showed no benefit over its control and comparison conditions; (b) no statistical comparisons between it and RR were reported; (c) the alternative treatment no longer seems to be available.

**Main references:** Sylva and Hurry (1995a, b, 1996), Hurry and Sylva (1998, 2007)

**Research design:** Reading Recovery was compared with two comparison groups, one in the same schools, the other in different schools. A three-group matched-groups quasi-experiment because the groups were not created by random allocation

**Date:** 1992–93

**Age range:** Y2

**Type of children:** Low attainment

**N of experimental group:** 89 in 22 schools (i.e. all but two of the 24 schools in England which were the only ones using Reading Recovery at the time) in seven LAs in south-east England, six in Greater London (Bexley, Greenwich, Hammersmith and Fulham, Islington, Wandsworth, Westminster), plus Surrey – but only 72 in 17 schools for within-school comparisons because five schools had no within-school comparison pupils

**Ns of comparison groups:** (1) 40 in 17 of the RR schools; (2) 152 in 18 different schools

**Equivalence of groups:** In each LA which had RR schools in 1992, the primary adviser identified schools with similar intakes to each RR school; 18 schools provided the between-schools comparison group for RR. In each school the six poorest readers (roughly the bottom 20%) in Y2 were identified using Clay's Diagnostic Survey (Clay, 1985). In the RR schools, those children (usually four) with the lowest scores were given the programme, while the others were allocated to the within-schools comparison group.

**Average length of intervention in weeks:** 21 (but average nine months between pre-test in Sept/Oct 1992 and post-test in May–July 1993). One-year follow-up took place in May–July 1994, and three-year follow-up in Sept–Dec 1996.

**Literacy tests:** (reading) BASWRT, (comprehension) Neale at pre- and post-test and one-year follow-up, NFER-Nelson Group Reading Test 6–12 at three-year follow-up

**Pre- and post-test and 12-month follow-up average r.a.'s in years and months on BASWRT and gains in reading accuracy over previous test in months of r.a. (s.d.'s not stated), and effect sizes at post-test and statistical significances at post-test and follow-up (allowing for differences on pre-test) as stated in Hurry and Sylva (2007):**

Group	N	pre r.a.	post r.a.	gain	Effect size†	1-year follow-up r.a.	gain
(1)	72/89	4:11	6:4	17		6:11	7
(2)	40	5:3	6:1	10	0.81***	7:0	11
(3)	152	5:6	6:1	7	0.84***	6:11	10***

† Upper effect size is for group (1) vs (2); lower effect size is for group (1) vs (3)

N = sample size at post-test (for the variable N, see above); \*\*\* =  $p < 0.001$

Key to groups: (1) RR; (2) within-schools comparison group; (3) between-schools comparison group

**Pre- and post-test and 12-month follow-up average raw scores and s.d's on Neale, gains in reading comprehension over previous test in points of raw score, effect sizes at post-test calculated (by GB) using pooled post-test s.d's, and statistical significances at post-test and follow-up (allowing for differences on pre-test) as stated in Hurry and Sylva (2007):**

Group	N	pre-test		post-test		gain	Effect size†		1-year follow-up	
		ave.	(s.d.)	ave.	(s.d.)		ave.	(s.d.)	gain	
(1)	72/89	0	(1)	11.3	(6.6)	11.3		19.5	(11.3)	8.2
(2)	40	2	(3)	10.7	(9.7)	8.7	0.33**	20.1	(14.8)	9.4
(3)	152	2	(3)	9.2	(7.9)	7.2	0.55***	18.9	(13.2)	9.7***

† Upper effect size is for group (1) vs (2); lower effect size is for group (1) vs (3)

N = sample size at post-test (for the variable N, see above); \*\*\* = p<0.001; \*\* = p<0.01

Key to groups: (1) RR; (2) within-schools comparison group; (3) between-schools comparison group

**Starting and ending levels and progress:** Unusually, here the pre-test raw scores on the Neale do permit characterisation of the starting level. Since almost all Y2 pupils would score on this test, the fact that almost all these children did not means they were well behind. This is confirmed by the very low pre-test r.a's on the BASWRT.

Between pre- and post-test, the RR group made significantly greater progress than both comparison groups in accuracy (BASWRT) and comprehension (Neale), as shown by the effect sizes.

At the one-year follow-up, the RR children were no longer ahead of, but had still made significantly better progress than, the between-schools comparison group on both tests, but had no longer made significantly better progress than the within-schools comparison group.

**Average comprehension r.a's (s.d's not stated) on NFER-Nelson test at three-year follow-up:**

Group	N	r.a.
(1)	63/89	8:4
(2)	35	8:7
(3)	137	8:8

N = sample size (for the variable N, see above)

All differences were statistically non-significant.

Key to groups: (1) RR; (2) within-schools comparison group; (3) between-schools comparison group

At the three-year follow-up, the RR group was no longer significantly better than its comparison groups.

However, within the RR group, children who had been complete non-readers at the pre-test in 1992 did stay ahead of comparable children in the comparison groups. 'For the children who were not reading at all at six years old, Reading Recovery was more effective [for reading] at every follow-up point than for slightly better readers' (Hurry and Sylva, 2007).

But then again, given that at the three-year follow-up the average c.a. was 10:3, all groups were well behind national norms: '[I]t would appear that, in the long-term, the intervention had [not] allowed the children to overcome their poor start with reading' (Hurry and Sylva, 2007).

The What Works Clearinghouse (2007a, b) meta-analysis contained one study, an RCT, in which children were followed up at the end of third grade, two years after the end of the programme (Baenen *et al.*, 1997). No significant advantage was found for RR. However, for more positive follow-up findings, see Reading Recovery in Britain and Ireland, below.

## 17 Reading Recovery

### (2) Every Child a Reader in London

**Main references:** Burroughs-Lange (2006), Burroughs-Lange and Douëttil (2007), Every Child a Reader (undated but known to have been published in 2006)

**Research design:** Matched groups two-group quasi-experiment

**Date:** 2005–06

**Age range:** Y1

**Type of children:** Low attainment – bottom 5–6% of the national distribution

**N of experimental group:** 87 in 21 schools in five London boroughs (Brent, Greenwich, Hackney, Hammersmith and Fulham, Southwark)

**N of comparison group:** 147 in 21 schools in five other London boroughs (Barking and Dagenham, Haringey, Islington, Lambeth, Lewisham)

**Equivalence of groups:** All ten boroughs were volunteers, but those in the experimental group already had some RR provision, while the comparison boroughs did not (but were to implement it in 2006–07). The two groups were similar in population characteristics and KS1 achievement levels. In the RR boroughs the schools which already had an RR teacher (N=21) were chosen to participate. In the comparison boroughs, the nominated schools (N=21) were those thought to be most in need of the programme. In each of the 42 schools, the lowest-attaining Y1 class was nominated to participate, and the eight children in that class thought to be poorest in literacy were chosen for the study. The two samples of schools were very similar in terms of number on roll, number in Y1, percentage of children on free school meals, and percentage of children having English as an additional language. The samples of children were very similar in terms of average age and gender balance. Small differences in pre-test scores were handled statistically in calculating results.

**Length of intervention in weeks:** Not stated, and it would in any case be standard RR practice for this to vary between 12 and 20 weeks, according to individual children's needs. Interval of ten months (Sept–July) between pre- and post-test used to calculate RGs

**Literacy tests:** BASWRT, WRAPS (Word Recognition and Phonic Skills); (also a writing vocabulary test – see entry 39 below)

**Pre- and post-test BASWRT r.a's/WRAPS ages and s.d's, gains in reading accuracy in months of r.a./WRAPS age (s.d's not stated), RGs, and effect sizes calculated using the pooled post-test s.d's:**

Test	group	N	pre-test		post-test		gain	RG	Effect size
			ave.	(s.d.)	ave.	(s.d.)			
BASWRT	exps	87	4:11	(0:2)	6:7	(0:9)	20	2.0	1.67
	comps	147	4:10	(0:2)	5:5	(0:7)	7	0.7	
WRAPS	exps	87	4:11	(0:6)	6:3	(0:8)	16	1.6	0.58
	comps	147	4:10	(0:6)	5:9	(0:9)	11	1.1	

N.B. (1) Except for the effect sizes, these figures are quoted from Burroughs-Lange and Douëttil (2007), and include small corrections from those in the previous edition.

(2) In the previous edition, standardised scores were also quoted for both tests. I have withdrawn them from this edition because they were calculated for these samples of children, and not from the tests' conversion tables, and the effect sizes derived from them are therefore not comparable with those from other interventions.

**Statistical significances:** Both of the experimental group's post-test average scores were statistically significantly higher than the comparison group's.

**Starting and ending levels and progress:** The pre-test r.a's/WRAPS ages show these children were well behind – on average they were still absolute non-readers and non-spellers. The RGs show that the experimental group made modest progress, while the effect sizes show that they made significantly more progress than the comparison group, especially in word recognition – hardly surprising since the comparison group had made only standard progress (WRAPS) or less (BASWRT). At post-test the experimental group's scores were at or near c.a., while the comparison group was still well behind.

**Follow-ups:** A follow-up was conducted in July 2007, one year after the intervention ended, when the children were at the end of Y2 (Burroughs-Lange, 2008); 77 children in the experimental group and 109 in the comparison group were traced.

**One-year follow-up average BASWRT r.a's/WRAPS ages and s.d's in years and months (with post-test data, and gains in months of r.a., in brackets because of different Ns):**

		follow-up			(post-test) (gain)		
Test	group	N	ave.	(s.d.)	(N	ave.	(s.d.))
BASWRT	exps	77	7:9	(1:2)	(87 6:7	(0:9))	14
	comps	109	6:9	(1:4)	(147 5:5	(0:7))	16
WRAPS	exps	77	7:6	(0:11)	(87 6:3	(0:8))	15
	comps	109	6:9	(1:3)	(147 5:9	(0:9))	12

Despite the attrition, the follow-up data suggest that the both groups had made either standard progress or slightly more. The experimental group's averages were close to c.a., but the comparison group's were still about a year behind.

A further follow-up was conducted in the summer of 2009, three years after the intervention ended, when the children were at the end of Y4 (Hurry and Holliman, 2009). Unfortunately, no data directly comparable with those from earlier assessments could be obtained, and attempts to correlate the data which were obtained with earlier assessments were unconvincing.

## 17 Reading Recovery

### (3) Reading Recovery across Britain and Ireland

**Main reference:** European Centre for Reading Recovery (2012)

**Research design:** One-group pre-test/post-test study

**Date:** 2011–12

**Age range:** Y1–2

**Type of children:** Low attainment

**N of experimental group:** 10,918 (at post-test) in 1,175 schools in 127 LAs/districts across the five jurisdictions

**Average length of intervention in weeks:** 18.5 (4.5 months used in calculating RG)

**Reading test:** BASWRT

**Pre- and post-test BASWRT r.a's in years and months, gains in reading accuracy in months of r.a. (s.d's not stated), and RGs:**

	N	%	pre	post	gain	RG
all children	10,918	100	4:10	6:7	21	4.7
discontinued children	8,976	82	4:10	6:10	24	5.3
referred children	1,942	18	4:10	5:10	12	2.7

**Effect sizes:** n/a

**Statistical significances:** Were not stated and could not be calculated

**Starting and ending levels and progress:** As expected, the pre-test average scores show that most of these children were non-readers. The overall post-test average is what would be expected of the average child at the beginning of Y2, and some of these children were already in Y2. However, the RGs show that on average the discontinued children had made remarkable progress, and that even those referred had made useful progress, though they were still well behind and would need further support

**Follow-ups:** All children who complete RR have their RR book bands assessed at that point, and as many as can be traced have them assessed again three and six months after their programme ends. The 2011/12 report gives the following equivalents of book bands in BASWRT r.a's at those three points for children who completed their programmes in that school year; the figures are larger than those above because they include a large number who had started their programmes in the previous school year.

Stage	'Discontinued' children		'Referred' children	
	N	BASWRT r.a.	N	BASWRT r.a.
end of programme	15,623	6:10	3,242	5:10
3-month follow-up	10,212	7:1	2,010	6:1
6-month follow-up	7,282	7:4	1,494	6:4

Though the sample sizes fall off, they are large enough to show that both groups made almost exactly normal progress: three months of r.a. gained in each three-month period, with the referred children a year behind at each stage. In other words, having returned to their classes, those discontinued children who could be traced and assessed were on average keeping up with their peers, but the referred children were not catching up.

## 17 Reading Recovery

### (4) Bristol

**Main reference:** Miles and Armstrong (2011)

**Research design:** One-group pre-test/post-test study

**Date:** 2010–11

**Age range:** Y1–2

**Type of children:** Low attainment

**N of experimental group:** 360

**Length of intervention in weeks:** 20

**Reading test:** BASWRT

**Pre- and post-test average r.a's in years and months, gain in months (s.d's not stated), and RG:**

pre	post	gain	RG
4:10	6:6	20	4.0

**Effect size:** n/a

**Statistical significance:** Was not stated and could not be calculated

**Starting and ending levels and progress:** On average these children were non-readers at the beginning, but by the end had come close to, or reached, c.a.. They achieved a remarkable gain.

## 18 Reciprocal Reading

**Main reference:** Unpublished data supplied by Andy Taylor and Jill Canning

**Research design:** One-group pre-test/post-test study

**Date:** 2011

**Age range:** Y5–6

**Type of children:** Low attaining children with reading comprehension ages significantly below their reading accuracy age

**N of experimental group:** 48

**Length of intervention in weeks:** 10 (2.5 months used in calculating RGs)

**Reading test:** York Assessment of Reading for Comprehension (YARC), second edition

**Pre- and post-test average r.a's in years and months, gain in months of r.a. (s.d's not stated) and RGs:**

	pre	post	gain	RG
reading accuracy	9:0	10:1	13	5.2
reading comprehension	8:2	9:6	16	6.4

**Effect sizes:** n/a

**Statistical significances:** Were not stated and could not be calculated

**Starting and ending levels and progress:** Average c.a. at start was 9:6, so these children were on average slightly behind in accuracy but well behind in comprehension. They made remarkable progress in both aspects, and by the end were on average four months ahead of c.a. in accuracy and only three months behind in comprehension.

## 19 Reciprocal Teaching

**Main reference:** Unpublished data supplied by Christa Rippon

**Research design:** One-group pre-test/post-test study

**Date:** 2002–03

**Age range:** Y3–6

**Type of children:** Low attainment

**N of experimental group:** 88 in an unstated number of schools in Haringey

**Length of intervention in weeks:** Ranged from 16 to 52 (overall RGs calculated using average interval, 6.6 months)

**Reading test:** Neale (accuracy and comprehension)

**Pre- and post-test average r.a.'s and s.d.'s in years and decimal years, gains and s.d.'s in months of r.a., and RGs:**

	Pre		Post		Gain		RG
	average	(s.d.)	average	(s.d.)	average	(s.d.)	
accuracy	9.9	(1.8)	11.1	(1.6)	16	(14)	2.2
comprehension	8.6	(1.4)	10.7	(1.8)	25	(21)	3.7

**Effect sizes:** n/a

**Statistical significances:** Both  $p < 0.001$

**Starting and ending levels and progress:** The pre-test scores show these children were on average already close to functionally literate for accuracy and almost out of the semi-literate range for comprehension, but the r.a. for comprehension is what would be expected of the average child at the beginning of Y4; given the age range this means that many were well behind (but fewer in accuracy). The post-test scores are at Y6 level for both accuracy and comprehension, so many must by then have been at least at c.a. The RGs show useful progress in accuracy and substantial progress in comprehension.

## 20 SIDNEY

**Main references:** Norgate and Bentote (2005) and unpublished data supplied by Roger Norgate

**Research design:** One-group pre-test/post-test study

**Date:** 2004

**Age range:** Y1–2

**Type of children:** Low attainment, on average

**N of experimental group:** 66 children in 14 schools

**Length of intervention in weeks:** 12

**Reading and phonics (including spelling) test:** WRAPS

**Pre- and post-test average WRAPS ages in years and months, gains in accuracy in months of WRAPS age, s.d.'s, and RG:**

	pre		post		gain		RG
	ave.	(s.d.)	ave.	(s.d.)	ave.	(s.d.)	
WRAPS age	5:0	(0:6)	5:7	(0:7)	7	(7)	2.3

**Starting and ending levels and progress:** At pre-test these children had scarcely made a start on literacy; by post-test they were just above the level of an average child in Y1, but had made useful progress, as shown by the RG.

## 21 Sound Discovery®

### (1) Norfolk

**Main reference:** Worsley (2005)

**Research design:** One-group pre-test/post-test study

**Date:** 2005

**Age range:** Y2–5

**Type of children:** 'We work almost exclusively with pupils at School Action+ of the Code of Practice, pupils in the process of Statutory Assessment and Pupils with Statements.'

**N of experimental group:** 38 in 11 schools

**Length of intervention in weeks:** 12

**Reading test:** Salford Sentence Reading Test, third edition

**Pre- and post-test average reading ages in years and months and gain in reading comprehension in months of r.a. (s.d's not stated), and RG:**

Pre	Post	Gain	RG
5:9	6:6	9	3.1

**Effect size:** n/a

**Statistical significance:** Was not stated and could not be calculated

**Starting and ending levels and progress:** Both average scores were in the functionally illiterate range, but the progress made was substantial.

## 21 Sound Discovery®

### (2) Bedfordshire

**Main reference:** Unpublished data supplied by Jo Padbury via Marlynne Grant

**Research design:** One-group pre-test/post-test study

**Dates:** 2006–07

**Age range:** Y5

**Type of children:** Said to be 'almost exclusively pupils at School Action+ of the Code of Practice, pupils in the process of Statutory Assessment and Pupils with Statements'

**N of experimental group:** 126 in 1 middle school

**Length of intervention in weeks:** Ten (four months between pre- and post-test, Sept 2006–January 2007, used in calculating RG)

**Spelling test:** NFER-Nelson Single Word Spelling Test E

**Pre- and post-test average s.a.'s and s.d.'s in years and months, gain in spelling and s.d. in months of s.a., and RG:**

pre		post		gain		RG
ave.	(s.d.)	ave.	(s.d.)	ave.	(s.d.)	
9:6	(1:9)	10:2	(1:8)	8	(7)	2.0

**Effect size:** n/a

**Statistical significance:** Was not stated and could not be calculated

**Starting and ending levels and progress:** Though already close to the threshold of functional literacy, the pre-test average score shows these pupils were slightly behind. They made useful progress, and were catching up to the average for their age.

## 22 Sound Reading System

**Main reference:** Unpublished data supplied by Fiona Nevola and Diane McGuinness

**Research design:** One-group pre-test/post-test study

**Date:** 2003–07

**Age range:** Y2–adult

**Type of children:** Low attainment

**N of experimental group:** 140

**Average length of intervention in weeks:** 18 (treated as 4.2 months in calculating RGs)

**Tests used:** (Reading) nferNelson New Reading Analysis/Individual Reading Analysis; (spelling) Young's Parallel Spelling Test/Schonell

**Pre- and post-test average scores and s.d's:** Not stated

**Average gains in months of reading/spelling age (s.d's not stated), and RGs:**

	average gain	RG
reading accuracy	28	6.7
reading comprehension	30	7.1
spelling	27	6.4

**Effect sizes:** n/a

**Statistical significances:** Were not stated and could not be calculated

**Starting and ending levels and progress:** Without pre- and post-test data it is impossible to characterise the starting and ending levels. However, the RGs show remarkable progress in all three areas.

### 23 Sound Training for Reading®

**Main reference:** Unpublished data supplied by Katy Parkinson

**Research design:** Two one-group pre-test/post-test studies

**Date:** 2010–12

**Age range:** (2010–11) Y5–6; (2011–12) 'KS2'

**Type of pupils:** Mixed-ability mainstream pupils, none statemented but with reading ages between 1 and 3 years below c.a..

**N of treatment group:** (2010–11) 52 in six schools in Middlesbrough  
(2011–12) 102 in ten schools in Middlesbrough and Co. Durham

**Length of intervention in weeks:** Eight (two months used in calculating RGs)

**Reading test:** GL Assessment single word reading test

**Pre- and post-test average r.a's in years and months and standardised scores (ss) in standardised score points, s.d's in same units, gains in reading accuracy in months of r.a. and ss, s.d's in same units, and RGs:**

cohort	N		pre		post		gain		RG
			ave.	(s.d.)	ave.	(s.d.)	ave.	(s.d.)	
2010–11	52	r.a.	8:5	(0:9)	10:0	(1:7)	19	(15)	9.4
2011–12	102	r.a.	8:7	(1:1)	10:1	(1:11)	17	(12)	8.7

**Effect sizes:** n/a

**Statistical significances:**  $p < 0.001$  in both cases

**Starting and ending levels and progress:** Both starting average standardised scores, and the 2010–11 starting average r.a., show that these pupils were well behind (the average c.a. of the 2011–12 cohort was not known). The remarkable progress shown by the RGs means that by the end both cohorts were at or near the average for their age.

## 24 The Complete Spelling Programme

**Main reference:** McMurray (2006)

**Research design:** Matched-groups two-group quasi-experiment

**Date:** 1999–2001

**Age range:** Northern Ireland Y2–4 (England and Wales Y1–3)

**Type of children:** Mixed-ability

**N of experimental group:** 43 in two schools in Northern Ireland

**N of comparison group:** 38 in two other schools in Northern Ireland

**Equivalence of groups:** No significant differences between groups at pre-test on reading, spelling or verbal ability

**Length of intervention in weeks:** 120 (Jan 1999–May 2001)

**Spelling test used:** British Spelling Test Series

**Pre- and post-test average standardised scores and s.d.'s, gains in standardised score points (s.d.'s not stated), and effect sizes calculated as difference in gains divided by the pooled post-test s.d.:**

group	pre		post		gain ave.	effect size
	ave.	(s.d.)	ave.	(s.d.)		
experimental	94.74	(12.22)	113.20	(11.02)	18.46	1.19
comparison	95.42	(11.56)	100.26	(12.26)	4.84	

**Ratio gains:** n/a

**Statistical significance:**  $p < 0.0001$

**Starting and ending levels and progress:** At the start both groups were only slightly below the national norm, which the comparison group reached by the end. Meanwhile, the experimental group made remarkable progress, as shown by both their gain score and the large effect size, so that by the end that group was on average almost one s.d. above the norm.

## 25 THRASS

### (1) Bridgend

**Main reference:** Matthews (1998)

**Research design:** One-group pre-test/post-test study

**Date:** 1998

**Age range:** Y3–6

**Type of children:** Low attainment

**N of experimental group:** 160 in eight schools (for year groups, see below)

**Length of intervention in weeks:** 13

**Tests:** (Reading) Neale; (spelling) Schonell

**Pre- and post-test average r.a's and s.a's and s.d's:** Not stated

**Gains (in months of r.a./s.a.) and RGs:**

	N	Reading accuracy		Reading comprehension		Spelling	
		Gain	RG	Gain	RG	Gain	RG
Y3	30	6.6	2.2	7.0	2.3	7.5	2.5
Y4	45	7.3	2.4	8.2	2.7		
Y5	39	10.3	3.4	11.3	3.8		
Y6	46	7.1	2.4	12.5	4.2		

**Effect sizes:** n/a

**Statistical significances:** Were not stated and could not be calculated

**Starting and ending levels and progress:** The absence of pre- and post-test scores does not permit characterisation of starting and ending levels. All groups made useful to substantial gains in reading (both aspects) as did Y3 in spelling.

## 25 THRASS

### (2) Hampshire

**Main reference:** Unpublished data supplied by Roger Norgate via Alan Davies

**Research design:** One-group pre-test/post-test study

**Date:** 2005

**Age range:** Y2–5

**Type of children:** Low attainment

**N of experimental group:** 84 in five schools

**Average length of intervention in weeks:** 26 (six months used in calculating RG)

**Reading test:** Salford, third edition

**Pre- and post-test average r.a's and s.d's in years and months, gain in reading comprehension and s.d. in months of r.a., and RG:**

pre		post		gain		RG
ave.	(s.d.)	ave.	(s.d.)	ave.	(s.d.)	
5:11	(1:5)	7:1	(1:7)	14	(10)	2.3

**Effect size:** n/a

**Statistical significance:** Was not stated and could not be calculated

**Starting and ending levels and progress:** The average pre-test score was in the functionally illiterate range, and at about the level of the average child half-way through Y1 – but most of these children were older. By post-test they were just into the semi-literate range, having made useful progress.

**26 Toe by Toe®****Main reference:** MacKay (2006)**Research design:** One-group pre-test/post-test study**Date:** 2002–03**Age range:** Scottish Primary 5–7 (= England and Wales Y5–7, but treated here as primary)**Type of children:** 'Experiencing significant reading difficulties' (r.a. below 9:6)**N of experimental group:** 104 in 32 schools (91 in P7, 12 in P6, one in P5)**Length of intervention in weeks:** 24**Reading test:** Neale, second revised UK edition, Form 2**Pre- and post-test average r.a's in years and months and gain in months of r.a. (s.d's not stated), and RG:**

	<b>pre</b>	<b>post</b>	<b>gain</b>	<b>RG</b>
reading accuracy	8:0	9:2	14	2.5

**Effect size:** n/a**Statistical significance:** Was not stated and could not be calculated**Starting and ending levels and progress:** The pre-test score was in the semi-literate range. Even with the useful progress made, the post-test score was still only just out of that range, and these pupils would require very substantial further support.

## B. Schemes for reading and spelling at KS3

In addition to those listed in this section, there are data for KS3 pupils mixed in with those for primary pupils under the following schemes listed in the previous section: AcceleRead AcceleWrite, Lexia, Paired Reading, Reading Intervention, Sound Reading System.

### 27 Better Reading Partnership

**Main reference:** Taylor (2000)

**Research design:** One-group pre-test/post-test study

**Date:** 1998–99 (though data collected in other years too)

**Age range:** Y7–8

**Type of children:** Low attainment

**N of experimental group:** 189 in undisclosed number of schools in Derbyshire (for year groups, see below)

**Length of intervention in weeks:** 11 (2.5 months used in calculating RGs)

**Reading test:** Salford (mainly)

**Pre- and post-test average scores, gains and s.d.'s:** Not stated

**Gains in reading comprehension in months of r.a. (s.d.'s not stated) and RGs:**

	<b>N</b>	<b>Gain</b>	<b>RG</b>
Y7	132	10.2	4.1
Y8	57	12.4	5.0

**Effect sizes:** n/a

**Statistical significances:** Were not stated and could not be calculated

**Starting and ending levels and progress:** The absence of pre- and post-test scores does not permit characterisation of starting and ending levels. However, the RGs show substantial progress.

## 28 Catch Up Literacy

### (1) Rhondda Cynon Taf and Vale of Glamorgan

**Main reference:** Unpublished data supplied by Julie Lawes

**Research design:** One-group pre-test/post-test study

**Date:** 2005–07

**Age range:** Y7–9

**Type of children:** Low attainment

**N of experimental group:** 175 in 13 schools

**Average length of intervention in weeks:** 34 (eight months used in calculating RG)

**Reading tests:** Hodder/Murray DRA, NFER Group Reading Test 6–14

**Pre- and post-test average scores and s.d's:** Not stated

**Average gain in reading comprehension in months of r.a. (s.d. not stated), and RG:**

gain	RG
19	2.4

**Effect size:** n/a

**Statistical significance:** Was not stated and could not be calculated

**Starting and ending levels and progress:** Without pre- or post-test data it is impossible to characterise the starting and ending levels. However, the RG shows useful progress.

## 28 Catch Up Literacy

### (2) Nottingham

**Main references:** Holmes *et al.* (2011, 2012)

**Research design:** RCT

**Date:** 2008–09

**Age range:** Y8–9

**Type of children:** Low attainment

**N of experimental group:** 20 in six schools

**N of control group:** 65 in same schools

**Equivalence of groups:** Randomly assigned; pre-test average scores did not differ significantly; control group received 'matched-time support (additional literacy support of the teacher's choice, but not Catch Up Literacy, for approximately the same amount of time)'

**Reading test:** Salford

**Length of intervention in weeks:** 17 (four months used in calculating RGs)

**Pre- and post-test average comprehension scores, gains and s.d's (all in months of r.a.), RGs, and effect size calculated as difference in gains divided by pooled post-test s.d.:**

Group	N		pre	post	gain	RG	effect size
exps	20	ave.	85.7	98.8	13.1	3.3	0.58
		(s.d.)	(9.4)	(13.9)	(8.7)		
conts	65	ave.	88.9	94.5	5.6	1.4	
		(s.d.)	(11.9)	(12.9)	(8.7)		

N.B. The authors report an effect size of 0.86, but this was calculated as the difference in the RGs divided by the pooled post-test s.d.

**Statistical significance:**  $p < 0.005$  for difference in gains; significances of separate gains not stated

**Starting and ending levels and progress:** Both groups had average r.a.'s of just more than seven years at the start, and were therefore about six years behind. The control group made just more than standard progress and at the end were about two months less far behind. The experimental group made substantial progress, and at the end were nine months less far behind. The useful effect size confirms the difference.

## 29 Corrective Reading

**Main reference:** Kirby (2007), unpublished but supplied by Caroline Jennings

**Research design:** One-group pre-test/post-test study

**Date:** 2006–07

**Age range:** Y7

**Type of children:** Low attainment; all but 31 on various stages of the Code, including two statemented

**N of experimental group:** 92 in one school in Kent

**Length of intervention in weeks:** 17 (four months between pre- and post-test used in calculating RG)

**Reading test:** NFER

**Pre- and post-test average r.a's and s.d's in years and months, gain in reading accuracy and s.d. (in months of r.a.), and RG:**

pre		post		gain		RG
ave.	(s.d.)	ave.	(s.d.)	ave.	(s.d.)	
8:6	(1:6)	9:6	(1:9)	12	(13)	3.0

**Effect size:** n/a

**Statistical significance:** Was not stated and could not be calculated

**Starting and ending levels and progress:** The pre-test score was in the semi-literate range, and about three years below c.a. Catching up by a year of r.a. in four months is substantial progress, as shown by the RG, but these children would still struggle with the secondary curriculum, and would need further structured support.

### 30 ENABLE-PLUS (KS3)

**Main reference:** For a description of the programme, Bowen and Yeomans (2002); unpublished data analysed below supplied by Phil Bowen

**Research design:** One-group pre-test/post-test study

**Date:** 2006

**Age range:** Y7–9

**Type of children:** SEN, including ten pupils with statements, six deemed statemented (School Action Plus with LA funding), five School Action Plus, and 15 at School Action

**N of experimental group:** 36 in three schools

**Length of intervention in weeks:** 10–14 (three months used in calculating RG)

**Reading test:** Salford Sentence Reading Test (Revised), 2000

**Pre- and post-test average r.a.'s in years and months and gain in reading comprehension in months of r.a. (s.d.'s not stated), and RG:**

pre	post	gain	RG
7:1	8:0	11	3.7

**Effect size:** n/a

**Statistical significance:** Was not stated and could not be calculated

**Starting and ending levels and progress:** Given that these pupils were on average five years or more behind in reading age and barely semi-literate at the start, and evidently had acute special educational needs, this was a substantial gain for them; but they were still on average four years or more behind in reading age at the end, and the level reached would still be inadequate for them to cope fully with the secondary curriculum.

### 31 Inference Training

**Main reference:** Unpublished data supplied by Tony Whatmuff

**Research design:** One-group pre-test/post-test study

**Date:** 2009–11

**Age range:** Y7–9

**Type of children:** Low attainment

**N of experimental group:** 120

**Length of intervention in weeks:** 15 (4.5 months used in calculating RG)

**Reading test:** Kirklees revision of Vernon

**Pre- and post-test average r.a's and s.d's:** Not stated

**Average gain in months of r.a. for accuracy (s.d. not stated) and RG:**

Gain	RG
11.5	3.4

**Effect size:** n/a

**Statistical significance:** Was not stated and could not be calculated

**Starting and ending levels and progress:** The absence of pre- and post-test data means the starting and ending levels cannot be characterised. However, the RG shows substantial progress in reading accuracy.

### 32 Rapid Plus

**Main reference:** Unpublished report and data supplied by Alison Beynon via Robert Nottage

**Research design:** One-group pre-test/post-test study

**Date:** 2012

**Age range:** Y7–10 (but only two pupils in Y10)

**Type of children:** ‘Struggling with aspects of reading, and performing below chronological expectations’

**N of experimental group:** 38

**Length of intervention in weeks:** 13 (3.5 months between pre- and post-test used in calculating RG)

**Reading test:** Salford Sentence Reading Test, 2012 edition (Form C at pre-test, Form A at post-test)

**Pre- and post-test average r.a's and s.d's:** Not stated

**Gains in months of r.a. (s.d's not stated), and RGs:**

	gain	RG
accuracy	16	4.6
comprehension	20	5.7

**Effect sizes:** n/a

**Statistical significances:** Not stated

**Starting and ending levels and progress:** Apart from the description quoted under ‘Type of children’ above, the only information on starting level was that the average r.a. then was 7:0 (it is not clear whether this was for accuracy or comprehension). In either case, these KS3 pupils were severely delayed in reading – even those in Y7 by four years on average and the rest by even more. The gains were substantial, but much more progress would be needed to bring these pupils up to a functionally literate level.

### 33 Read Write Inc. Fresh Start

#### (1) Leicester

**Main reference:** Lanes *et al.* (2005)

**Research design:** One-group pre-test/post-test study

**Date:** 2003–05

**Age range:** Y7

**Type of children:** Pupils with r.a's below 9:0 on entry to the school

**N of experimental group:** 63 in two consecutive cohorts in one secondary school in Leicester

**Length of intervention in weeks:** 34 (nine months used in calculating RG)

**Tests used:** New Macmillan Individual Reading Analysis, Vernon Spelling Test

**Pre- and post-test average r.a's and s.d's in years and months, gain in reading comprehension and s.d. in months of r.a., and RG:**

pre		post		gain		RG
ave.	(s.d.)	ave.	(s.d.)	ave.	(s.d.)	
7:10	(0:11)	9:7	(1:3)	21	(10)	2.3

**Effect size:** n/a

**Statistical significance:** Was not stated and could not be calculated

**Starting and ending levels and progress:** The pre-test score was in the semi-literate range, and the post-test score getting closer to the threshold for functional literacy. The pupils made useful progress in reading, but would need further structured support.

**33 Read Write Inc. Fresh Start**

**(2) Cornwall**

**Main reference:** Unpublished data supplied by Rosemary Austin

**Research design:** One-group pre-test/post-test study

**Date:** 2006–07

**Age range:** Y7

**Type of children:** Low attainment on entry to school

**N of experimental group:** 27 in one secondary school

**Length of intervention in weeks:** Six (1.5 months used in calculating RG)

**Tests used:** NFER 9–14 Group Reading Test 2

**Pre- and post-test r.a's and s.d's in years and months, gain in reading comprehension and s.d. in months of r.a., and RG:**

pre		post		gain		RG
ave.	(s.d.)	ave.	(s.d.)	ave.	(s.d.)	
8:3	(1:5)	9:3	(1:4)	12	(16)	8.0

**Statistical significance:** Was not stated and could not be calculated

**Starting and ending levels and progress:** Pre-test score was in the semi-literate range/below age-related expectation. Having made remarkable progress, at post-test these pupils were still on average approximately two years behind, and would need further support.

### 34 Sound Training for Reading®

**Main reference:** Unpublished data supplied by Katy Parkinson

**Research design:** Matched-groups two-group quasi-experiment

**Date:** 2004–05

**Age range:** Y9

**Type of pupils:** Mixed-ability, mainstream pupils, none statemented but with reading ages up to four years below c.a.

**N of experimental group:** 70 in one school

**N of comparison group:** 21 in same school

**Equivalence of groups:** School splits Y9 into two equitable halves (on gender, ability, behaviour, ethnicity). Experimental pupils were selected from one half and comparison pupils from the other. Pre-intervention scores for the groups were matched – it is not clear to what extent this or other factors explain the discrepancy in group sizes.

**Length of intervention in weeks:** Six (but nine months between pre- and post-test used in calculating RG)

**Reading test:** NFER graded word reading test

**Pre- and post-test average r.a's and s.d's in years and decimal years, gains in reading accuracy and s.d's in months of r.a., and effect size calculated using the pooled post-test s.d.:**

	N	pre		post		gain		effect size
		ave.	(s.d.)	ave.	(s.d.)	ave.	(s.d.)	
exps	70	10.8	(1.0)	11.9	(1.2)	13	(12)	0.68
comps	21	11.1	(1.2)	11.4	(1.4)	3	(8)	

**Statistical significances:** The experimental group's gain, and the difference between that and the comparison group's gain, were significant at  $p < 0.001$ ; the comparison group's gain was non-significant.

**Starting and ending levels and progress:** The average c.a. of pupils entering Y9 is 13.5, so even with their functionally literate scores these groups were well behind and struggling with the secondary curriculum. The experimental group made modest progress, but the useful effect size and highly significant difference between the gains show that they had made much better progress than the comparison group, who had fallen much further behind.

### 35 Thinking Reading

**Main reference:** Unpublished data supplied by Dianne Murphy

**Research design:** One-group pre-test/post-test study

**Date:** 2007–10

**Age range:** Y7–11 (but only five were in Y10–11)

**Type of children:** Low attainment

**N of experimental group:** 44 in one high school in Hammersmith and Fulham

**Average length of intervention in weeks:** 34 (but average interval between pre- and post- test, 14.6 months, used in calculating RG)

**Reading test:** Probe Reading Assessment

**Pre- and post-test average r.a's and s.d's:** Not stated

**Gain and s.d. in months of accuracy r.a., and RG:**

gain	(s.d.)	RG
82	(16)	5.6

**Effect size:** n/a

**Statistical significance:** Was not stated and could not be calculated

**Starting and ending levels and progress:** In the absence of pre- and post-test average scores the starting and ending levels cannot be characterised. However, the RG shows remarkable progress, sustained over an unusually long period.

### 36 THRASS

#### (1) Bridgend

**Main reference:** Matthews (1998)

**Research design:** One-group pre-test/post-test study

**Date:** 1998

**Age range:** Y7

**Type of children:** Low attainment

**N of experimental group:** 57 in four schools in Bridgend

**Length of intervention in weeks:** 13

**Tests used:** (Reading) Neale; (spelling) Schonell

**Pre- and post-test average r.a's and s.a's and s.d's:** Not stated

**Gains (in months of r.a./s.a.) and RGs:**

	gain	RG
reading accuracy	12.0	4.0
reading comprehension	17.0	5.7

**Effect sizes:** n/a

**Statistical significances:** Were not stated and could not be calculated

**Starting and ending levels and progress:** The absence of pre- and post-test scores means that starting and ending levels cannot be characterised. However, this group made remarkable progress in both aspects of reading.

### 36 THRASS

#### (2) Sheffield

**Main reference:** Unpublished data supplied by Yewlands Secondary School (now Yewlands Technology College) via Alan Davies

**Research design:** One-group pre-test/post-test study

**Date:** 2008

**Age range:** Y7

**Type of children:** Low attainment

**N of experimental group:** 200 in one school

**Length of intervention in weeks:** Eight (two months used in calculating RG)

**Spelling test:** Schonell

**Pre- and post-test average r.a's and s.d's:** Not stated

**Gain in months of s.a. (s.d. not stated) and RG:**

gain	RG
8	4.0

**Effect size:** n/a

**Statistical significance:** Was not stated and could not be calculated

**Starting and ending levels and progress:** The absence of pre- and post-test scores does not permit characterisation of starting and ending levels. However, the RG shows substantial progress.

### 37 Toe by Toe®

**Main reference:** Mackay (2006)

**Research design:** Matched-pairs two-group quasi-experiment

**Date:** Not stated, but before 2002

**Age range:** Scottish Secondary 1–2 (= England and Wales Y8–9)

**Type of children:** Referred for learning support because of low reading levels.

**N of experimental group:** 12 in one secondary school

**N of comparison group:** 12 in same school receiving normal learning support

**Equivalence of groups:** 'The two samples were matched as closely as possible' (MacKay, 2006: 182)

**Length of intervention in weeks:** 13 – but the 12 month-gap between pre- and post-test used in calculating RGs

**Reading test:** Gapadol Reading Comprehension Test

**Pre- and post-test average r.a's in years and months and gains in months of r.a. (s.d's not stated), and RGs:**

	pre	post	gain	RG
exps	8:2	10:2	24	2.0
comps	8:5	8:9	4	0.3

**Effect size:** Could not be calculated

**Statistical significance:**  $p < 0.001$

**Starting and ending levels and progress:** Both pre-test scores, and the comparison group's post-test score, were in the semi-literate range. With the useful progress made, the experimental group's post-test score was much closer to the level required to cope with the secondary curriculum, though even these pupils would require substantial further support.

## C. Schemes for writing at primary and KS3 levels

Of the four schemes listed here, only the last is for KS3; the others are for primary level.

### 38 Paired Writing

#### (1) The Primary 4 study

**Main references:** Sutherland and Topping (1999); also summarised in Topping (2001), and Topping *et al.* (2000); approach also described in Topping (1995)

**Research design:** Matched groups RCT

**Date:** Not stated (c.1997)

**Age range:** Scottish Primary 4 (= England and Wales Y4) ('eight-year-olds')

**Type of children:** Mixed ability

**N of experimental groups:** 16 in each of two classes in one school; one group had helpers ('tutors') of same ability (and swapped roles at intervals), the other had helpers of different ability (and did not swap roles)

**N of control groups:** 16 in each of the same two classes

**Equivalence of groups:** Chosen randomly (alternate children on class register allocated to different groups, then groups randomly assigned to intervention or control)

**Length of intervention in weeks:** Eight

**Writing assessment:** Scottish 5–14 National Curriculum Guidelines (SQA, 1997) which have five levels, A (low) to E (high), converted to numerical scale 1–5 for statistical purposes in this study

**Average pre-and post-test raw scores and gains for writing, and s.d's of pre-and post-test score (s.d's of gains not stated), statistical significances, and effect sizes calculated as differences in gains divided by pooled post-test s.d's:**

<b>Cross-ability</b>		<b>Same-ability</b>	
<b>Experimental</b>	<b>Control</b>	<b>Experimental</b>	<b>Control</b>
<b>Pre-test</b>			
1.75	1.31	1.63	1.75
(0.97)	(0.92)	(0.78)	(0.43)
ns		ns	
<b>Post-test</b>			
2.13	1.44	1.69	1.56
(0.99)	(0.79)	(0.92)	(0.61)
<b>Gain</b>			
0.38 p = 0.036	0.13 ns	0.06 ns	-0.19 ns
ns effect size = 0.33		p = 0.049 effect size = 0.29	
difference between gains of two experimental groups significant, p = 0.038			

(source: Sutherland and Topping, 1999, Table 1, p.170, edited and incorporating details from text)

**Ratio gains:** n/a

**Starting and ending levels and progress:** Although the Scottish A–E scale defines progress, it is not directly age-related. However, if the five levels were taken to represent average achievement for various age-bands, A would relate to ages 5–6, B to ages 7–8, C to ages 9–10, etc. If so, all eight mean scores (taking the standard deviations into account) would represent a spread of attainment across levels A and B, and therefore probably somewhat below age-related expectations. The cross-ability experimental group made what appears to be a worthwhile gain, in itself and in relation to the control group. The apparently useful effect size for the same-ability experimental group, despite having made almost no gain, is due to their control group having scored lower at post-test than pre-test. Taken all together, the results suggest that the cross-ability approach is to be preferred.

### 38 Paired Writing

#### (2) The Primary 6 study

**Main references:** Yarrow and Topping (2001); also summarised in Topping (2001), and Topping *et al.* (2000); approach also described in Topping (1995)

**Research design:** Matched groups RCT

**Date:** Not stated (c.1997)

**Age range:** Scottish Primary 6 (= England and Wales Y6) ('10- and 11-year-olds')

**Type of children:** 'A problematic mixed-ability class'

**N of experimental group:** 13, all in one class in one school

**N of control group:** 13, all in the same class

**Equivalence of groups:** Children matched in pairs on basis of gender and pre-test writing scores and allocated to groups. Groups then allocated randomly to experimental or control group. Each group then divided at median score – lower half of experimentals became writers (tutees); lower half of control group became their control group; upper half of experimentals became helpers (tutors); upper half of control group became their control group. However, here all experimentals are treated as one group and all control group members as another because N would otherwise be too small

**Length of intervention in weeks:** Six (eight weeks between pre-and post-test)

**Writing assessment:** As Sutherland and Topping (1999) but using 35 sub-criteria to create 35-point scale. The writing was marked by people who were unaware of which group the children belonged to

**Pre-and post-test average raw scores and gains for writing, and s.d's of post-test and gain scores (s.d's of pre-test scores not stated), and effect size calculated using pooled post-test s.d.:**

	pre ave.	post		gain		effect size
		ave.	(s.d.)	ave.	(s.d.)	
Experimentals	11.10	16.15	(4.06)	5.08	(2.33)	0.63
Controls	11.16	13.54	(4.89)	2.38	(3.52)	

**Statistical significance:**  $p = 0.016$  for difference between gains

**Ratio gain:** n/a

**Starting and ending levels and progress:** Not possible to characterise the starting and ending levels (it is not clear how the 35-point scale would relate to levels A-E). The experimental group made what appears to be a useful gain, and the useful effect size shows it was distinctly larger than the control group's gain.

### 39 Reading Recovery

#### Every Child a Reader in London

**Main references:** Burroughs-Lange (2006), Burroughs-Lange and Dou  til (2007), Every Child a Reader (undated but known to have been published in 2006)

**Research design:** Matched-groups, two-group quasi-experiment

**Date:** 2005–06

**Age range:** Y1

**Type of children:** Low attainment – bottom 5–6% of the national distribution

**N of experimental group:** 87 in 21 schools in five London boroughs (Brent, Greenwich, Hackney, Hammersmith and Fulham, Southwark)

**N of comparison group:** 147 in 21 schools in five other London boroughs (Barking and Dagenham, Haringey, Islington, Lambeth, Lewisham)

**Equivalence of groups:** See entry 17 above

**Length of intervention in weeks:** Not stated, and it would be standard RR practice to vary this according to individual children’s needs anyway

**Writing assessment used:** Children were asked to ‘Write all the words you know’, given ten minutes to do this, and scored on those they wrote correctly

**Pre- and post-test raw scores and s.d.’s, gains in raw score (s.d.’s not stated), and effect size calculated using the pooled post-test s.d.’s:**

group	N	pre-test		post-test		gain	effect size
		ave.	(s.d.)	ave.	(s.d.)		
exps	87	6.2	(5.2)	45.4	(19.0)	39.2	1.63
comps	147	6.5	(7.0)	20.6	(13.0)	14.1	

**Statistical significance:** Experimental group’s post-test average score was statistically significantly higher than the comparison group’s

**Starting and ending levels and progress:** Raw scores mean it is not possible to characterise the starting and ending levels. The experimental group’s gain seems impressive, the comparison group’s gain pretty poor; the difference is confirmed by the remarkably large effect size.

**Follow-up:** A follow-up was conducted in July 2007, one year after the intervention ended, when the children were at the end of Y2 (Burroughs-Lange, 2008); 77 children in the experimental group and 109 in the comparison group were traced:

**One-year follow-up average raw scores and s.d.’s (with post-test data in brackets because of different Ns):**

group	N	follow-up		(post-test)		
		ave.	(s.d.)	(N	ave.	(s.d.))
exps	77	65.1	(28.1)	( 87	45.4	(19.0))
comps	109	34.1	(17.4)	(147	20.6	(13.0))

Despite the attrition, the follow-up data suggest that the experimental group had made significantly more progress.

A further follow-up was conducted in the summer of 2009, three years after the intervention ended, when the children were at the end of Y4 (Hurry and Holliman, 2009). Unfortunately, no data directly comparable with those from earlier assessments could be obtained, and attempts to correlate the data which were obtained with earlier assessments were unconvincing.

#### 40 Write Away Together

**Main reference:** Unpublished data gathered by Fischer Education Project Ltd and supplied by Jill Canning

**Research design:** One-group pre-test/post-test study

**Date:** 2007–08

**Age range:** Y2–6

**Type of children:** Low attainment (children who are not making expected gains in writing or are working below national expectations)

**N of experimental group:** 249

**Average length of intervention in weeks:** 12 (range 10–20; 12 weeks treated as a quarter of a year in calculating the RG)

**Writing assessment used:** At pre-test, school data on attainment in writing as measured by SAT or optional SAT scores, supplemented by teacher assessment judgements of writing levels; at post-test, writing levels determined by teacher assessments and attainment as measured against SAT and optional SAT criteria

**Pre- and post-test average scores and s.d's:** Not stated

**Average gain:** 4.0 points of Average Point Score

**Ratio gain calculated as below (by GB):** 5.3

It is not usually possible to calculate RGs for writing data because there are no standardised tests yielding 'writing ages'. However, Average Point Scores are designed such that the standard gain is 3 points per year (6 points per National Curriculum level). This allowed the calculation of an RG as follows: 4.0 points gain in a quarter of a year, if sustained, would equal 16.0 points gain in a full year; divided by the standard annual gain of 3.0 points, this equals 5.33, rounded to 5.3.

**Effect size:** n/a

**Statistical significance:** Was not stated and could not be calculated

**Starting and ending levels and progress:** Without pre- and post-test data it is impossible to characterise the starting and ending levels. However, the specially-calculated RG shows remarkable progress.

## 41 Grammar for Writing

**Main references:** Myhill *et al.* (2011, 2012)

**Research design:** Cluster RCT

**Date:** 2009–2010

**Age range:** Y8

**Type of children:** Mixed ability

**N of experimental group:** 378 in 16 schools in seven LAs

**N of control group:** 366 in 15 other schools in same LAs

**Equivalence of groups:** No significant differences between groups at pre-test on range of measures

**Length of intervention in weeks:** nine (three weeks in each term of a full school year)

**Writing assessment used:** 'Both the pre and post-test writing sample were a first-person narrative, drawing on personal experience, and written under controlled conditions. The test design and marking was led by Cambridge Assessment... To ensure that there was no task bias, a cross-over design was adopted where half the sample completed task 1 as the pre-test and task 2 as the post-test, while the other half of the sample reversed the order in which these tests were taken. Both sample sets were independently marked by Cambridge Assessment... The marking was based on ... three components: sentence structure and punctuation; text structure and organization; and composition and effect.' (Myhill *et al.*, 2011: 8)

**Pre- and post-test average raw scores and s.d's (supplied by Debra Myhill), gains (s.d's not stated), and effect size:**

group	pre		post		gain ave.	effect size
	ave.	(s.d.)	ave.	(s.d.)		
experimental	14.2	(5.7)	17.6	(5.7)	3.4	0.21
control	15.2	(6.2)	17.4	(6.0)	2.2	

**Statistical significance:**  $p < 0.001$

**Starting and ending levels and progress:** Raw scores do not permit characterisation of the starting and ending levels. However, the modest effect size shows a clear benefit for the experimental group.

## A.4 Comparisons between schemes

To provide a basis for comparing the interventions, including alternative treatment and control/comparison groups, the two forms of impact measure (RGs and effect sizes) have been put into rank orders, first for primary, then for secondary level, and within those, first for reading, then for spelling, and finally for both levels together for writing – see Tables A.5–10 below. In Tables A.5–6 and A.8–9, where measures for both reading accuracy and reading comprehension were available, both have been listed; all the blanks under ‘comprehension’ mean that only accuracy data were available for those groups, and vice versa.

As shown in Table A.4, in only four of the studies analysed here were different interventions compared within one study. However, these studies did provide useful comparative quantitative data, usually with statistical tests of the differences between approaches – these are included in the descriptions above, and form part of the basis for the judgements reported in [chapter 2](#). However, it proved impossible to indicate the statistical significance of differences between experimental and alternative treatment groups clearly in Tables A.5–10, and the small amount of such information is therefore provided in Table A.11. In the case of Inference Training (Sussex), the differences include those between the two experimental groups.

**Table A.5: List of reading studies for primary level in decreasing order of RG for whichever of accuracy (Acc) and comprehension (Comp) is the higher**

**Key**

RG of 4 or above	=	remarkable impact
RG between 3 and 4	=	substantial impact
RG between 2 and 3	=	useful impact

<b>Study</b>	<b>Year group</b>	<b>Acc</b>	<b>Comp</b>	<b>Follow-up</b>
A.R.R.O.W., Bristol	Y6	32.0	44.0	
Inference Training in Glasgow, expts 1 (poor comprehenders)	Y2–4		28.7	
Inference Training in Sussex, expts 1 (poor comprehenders)	Y3	4.3	17.4	
AcceleRead AcceleWrite in Devon	Y5–6	16.1		
A.R.R.O.W., England & Wales	Y1–6	16.0		
Inference Training in Glasgow, expts 2 (good comprehenders)	Y2–4		12.9	
Better Reading Partnership in Tameside	Y1		9.9	
Inference Training in Sussex, AT1 (comprehension exercises)	Y3	5.0	9.6	
Sound Training for Reading, 2010–11	Y5–6	9.4		
Better Reading Partnership in Durham	Y2	7.2	9.2	Maintained up to 12 months
Inference Training in Leicester, 2006	Y5–6	6.5	9.0	
Sound Training for Reading, 2011–12	Y5–6	8.7		
Phono-Graphix™ in Bristol	Y2–6	8.3	7.7	
Inference Training in Sussex, AT2 (rapid decoding)	Y3	3.0	8.2	
AcceleRead AcceleWrite in Wiltshire	Y5–6		7.7	
Inference Training in Leicester, 2009–11	Y3–6		7.3	
Better Reading Partnership in Durham	Y1	7.2	4.4	Continued to gain up to one year
Sound Reading System	Y2–18+	6.7	7.1	
Better Reading Partnership in Tameside	Y2		6.8	
Reciprocal Reading	Y5–6	5.2	6.4	
Better Reading Partnership in Tameside	Y6		6.4	
Inference Training in Sussex, expts 2 (good comprehenders)	Y3	3.9	5.9	
Better Reading Partnership in Tameside	Y5		5.4	

<b>Study</b>	<b>Year group</b>	<b>Acc</b>	<b>Comp</b>	<b>Follow-up</b>
Better Reading & Writing Partners 2009/10	Y1–6		5.0	
FFT Wave 3, 2008	Y1–5	4.8		
Reading Recovery in Britain & Ireland, 2011–12	Y1–2	4.7		Maintained up to six months Sub-samples of 1997/98 cohort still showed benefit after one and five years
Better Reading Partnership in Tameside	Y4		4.7	
Paired Reading, experimentals in comparison-group designs	Y1–11	3.4	4.6	Continued to gain for 17+ weeks
Better Reading Partnership in Tameside	Y3		4.4	
Paired Reading, all exps	Y1–11	3.3	4.3	
THRASS in Bridgend	Y6	2.4	4.2	
Better Reading and Writing Partners, 2010–11	Y1–6		4.1	
Reading Intervention in N. Yorks, 2006/07	Y1–6	4.0		
Reading Recovery in Bristol	Y1–2	4.0		
Better Reading P'ship in Notts., 2004–05	Y2–6		3.9	
Better Reading P'ship in Notts., 2005–06	Y2–6		3.9	
THRASS in Bridgend	Y5	3.4	3.8	
Read Write Inc. in Haringey	Y5–6	3.8		
Reciprocal Teaching	Y3–6	2.4	3.7	
Reading Intervention in N. Yorks, 2009/10	Y1–6	3.5		
Catch Up Literacy, pilot (exps in matched schools)	Y3	3.4		
Reading Intervention in N. Yorks, 2007–09	Y1–6	3.3		
Reading Intervention in N. Yorks, 2005–06	Y1–6	3.2		
Better Reading Partnership in Durham	Y3		3.2	Maintained up to 12 months
Cued Spelling	Y2–6	2.1	3.1	
Sound Discovery in Norfolk	Y2–5		3.1	
ENABLE ONE-TO-ONE	Y2		3.0	
Lexia in York	Y2–6		3.0	
Lexia in Cumbria	Y1–8		2.9	

<b>Study</b>	<b>Year group</b>	<b>Acc</b>	<b>Comp</b>	<b>Follow-up</b>
Better Reading Partnership in Durham	Y4		2.8	Maintained up to 12 months
FFT Wave 3, 2004	Y1–3	2.8		
THRASS in Bridgend	Y4	2.4	2.7	
Lexia in Darlington	Y1–8	2.7		
Catch Up Literacy, pilot (all experimentals)	Y3	2.6		
Read Write Inc. in Bristol	Y2–6	2.3	2.6	
Lexia in Norfolk	Y2–3		2.6	
Toe by Toe	Y5–7	2.5		
THRASS in Bridgend	Y3	2.2	2.3	
THRASS in Hampshire	Y2–5		2.3	
Catch Up Literacy, national	Y2–9		2.3	Sample re-tested after seven years still showed benefit
SIDNEY	Y1–2	2.3		
Phono-Graphix™ in Bristol	Y1	2.2		
ENABLE PLUS	Y3–5	2.2		
Better Reading Partnership in Durham	Y5		2.0	Maintained up to 12 months
Reading Intervention, general use in Cumbria	Y2–10	2.0		
Reading Recovery (ECaR in London), BASWRT	Y2	2.0		Maintained up to 12 months

**Table A.6: List of reading studies for primary level in decreasing order of effect size for whichever of accuracy and comprehension is the higher**

**Key**

Effect size above 1.00	=	remarkable impact
Effect size between 0.80 and 1.00	=	substantial impact
Effect size between 0.50 and 0.80	=	useful impact

Study	Year group	Effect size		Follow-up
		Acc	Comp	
Reading Recovery, ECaR in London, BAS	Y1	1.67		
Catch Up Literacy, pilot, expts in matched schools	Y3	1.11		
Paired Reading	Y1–11	0.87	0.77	Gain was maintained up to 17 weeks on
Reading Recovery (L&S), expts.	Y2	0.84/ 0.81 †	0.55/ 0.33 †	Some gains maintained, some lost, over three years
Reading Intervention, orig., expts (reading & phonology), Neale	Y2	0.54	0.77	One year on, expts still ahead relatively, but all groups making less than standard progress
Easyread	Y3–4	0.68		
Academy of Reading	Y6		0.59	
Reading Recovery, ECaR in London, WRAPS	Y1	0.58		Maintained up to 12 months
AcceleRead AcceleWrite in Jersey	Y3–9	0.55		Continued to gain for up to ten months

**Key to symbol**

†	=	First effect size is versus between-schools comparison group, second versus within-schools comparison group
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**Table A.7: List of spelling studies for primary level in decreasing order of RG****Key**

RG of 4 or above	=	remarkable impact
RG between 3 and 4	=	substantial impact
RG between 2 and 3	=	useful impact

N.B. None of these studies had follow-up data.

<b>Study</b>	<b>Year group</b>	<b>RG</b>
ARROW, Bristol	Y6	16.0
ARROW, England & Wales	Y1–6	12.0
AcceleRead AcceleWrite in Devon	Y5–6	9.8
Sound Reading System	Y2–18+	6.4
AcceleRead AcceleWrite in Wiltshire	Y3–6	6.2
ENABLE ONE-TO-ONE	Y2	3.5
Phono-Graphix™ in Bristol	Y2–6	3.3
Cued Spelling	Y2–6	3.1
Reading Intervention, general use in Cumbria	Y2–10	2.6
THRASS in Bridgend	Y3	2.5
Lexia in Cumbria	Y1–8	2.4
Lexia in York	Y2–6	2.0
Sound Discovery in Bedfordshire	Y5	2.0

The only spelling study at primary level for which an effect size could be calculated was The Complete Spelling Programme (Y2–4); its effect size was 1.19 (remarkable).

**Table A.8: List of reading studies for KS3 level in decreasing order of ratio gain for whichever of accuracy (Acc) and comprehension (Comp) is the higher**

**Key**

RG of 4 or above	=	remarkable impact
RG between 3 and 4	=	substantial impact
RG between 2 and 3	=	useful impact

N.B. None of these studies had follow-up data.

<b>Study</b>	<b>Year group</b>	<b>Acc</b>	<b>Comp</b>
Read Write Inc. Fresh Start in Cornwall	Y7		8.0
Rapid Plus	Y7-10	4.6	5.7
THRASS in Bridgend	Y7	4.0	5.7
Thinking Reading	Y7-11	5.6	
Better Reading Partnership	Y8		5.0
Better Reading Partnership	Y7		4.1
ENABLE PLUS (KS3)	Y7-9		3.7
Inference Training in Leicester	Y7-9	3.4	
Catch Up Literacy in Nottingham	Y8-9		3.3
Corrective Reading	Y7	3.0	
Catch Up Literacy in Wales	Y7-9		2.4
Read Write Inc. Fresh Start in Leicester	Y7		2.3
Toe by Toe	Y7	2.3	

**Table A.9: List of reading studies for KS3 level in decreasing order of effect size for whichever of accuracy and comprehension is the higher**

**Key**

Effect size above 1.0	=	remarkable impact
Effect size between 0.80 and 1.0	=	substantial impact
Effect size between 0.50 and 0.80	=	useful impact

Study	Year group	Effect size	
		Acc	Comp
Sound Training for Reading	Y9	0.68	
Catch Up Literacy in Nottingham	Y8–9		0.58

**Spelling at KS3 level**

The only KS3 study with spelling data showing sufficient impact to be listed was the use of THRASS at Yewlands Secondary School (now Yewlands Technology College) in Sheffield. The RG was 4.0 (substantial).

**Table A.10: List of writing studies for primary and KS3 levels in decreasing order of effect size**

**Key**

Effect size above 1.00	=	remarkable impact
Effect size between 0.80 and 1.00	=	substantial impact
Effect size between 0.50 and 0.80	=	useful impact
Effect size below 0.50	=	modest impact

Study	Year group	Effect size	Follow-up
Reading Recovery, ECaR in London	Y1	1.63	Further progress over next 12 months
Paired Writing	Y6	0.63	
Paired Writing, cross-ability v. control	Y4	0.33	
Paired Writing, same-ability v. control	Y4	(0.29)*	
Grammar for Writing	Y8	0.21	

\* Probably unreliable because experimental group made little progress, and the effect size is mainly due to the control group having fallen further behind.

The only writing study for which a RG could be calculated was Write Away Together (Y2–6); its RG was 5.3 (remarkable).

**Table A.11: Comparisons between experimental and alternative treatment (AT) groups at primary level**

N.B. There were no KS3 studies with AT groups.

Scheme	Finding
Catch Up Literacy, pilot and national studies	Not stated, but experimental sub-sample matched to AT group clearly made much greater progress than that group
Inference Training, Sussex	- On accuracy, all differences in gains among the two experimental and two AT groups were non-significant - On comprehension, Inference Training was more effective for less skilled comprehenders than for skilled comprehenders; Inference Training was more effective than rapid decoding (AT2) for less skilled comprehenders; BUT comprehension exercises (AT1) were just as effective as Inference Training
Inference Training, Glasgow	No stats given, but less skilled comprehenders in experimental group made much more progress than those in AT group
Reading Intervention (original, in Cumbria)	The experimental intervention (Reading with Phonology) was significantly better than both ATs (reading-only, phonology-only) on all three measures

### Follow-up data

In many cases the impact observed during educational interventions is found to diminish or even vanish afterwards. Was this true of the schemes analysed here? Of the 32 schemes studied, only six provided any information on re-tests of participating children at some point after the end of the intervention, namely AcceleRead AcceleWrite in Jersey, Better Reading Partnership in Durham, Catch Up Literacy, Paired Reading, Reading Intervention (original in Cumbria) and Reading Recovery (in three studies: London and Surrey, ECaR in London and ECaR across Britain and Ireland). For details, see the entries in this appendix. This paucity of evidence means that generalisations would be unsound, and none are offered in this edition.

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Copies may be available from: The Dyslexia-SpLD Trust

Email: [info@thedyslexia-spldtrust.org.uk](mailto:info@thedyslexia-spldtrust.org.uk)

T: 01344 381 564

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