Brooks's What Works for Literacy Difficulties?

The effectiveness of intervention schemes

6th edition

Edited by
Gary Lavan
and
Joel Talcott

The School Psychology Service

The Dyslexia-SpLD Trust

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The views expressed in this report are the authors' and do not necessarily reflect those of The School Psychology Service, Aston University or Dyslexia-SpLD Trust

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Thanks also to Joel Talcott, Ian Garner, and Aston University for their support with the continued development of the statistical analyses used in this edition.

And to The School Psychology Service and the Dyslexia-SpLD Trust for agreeing to host this edition on their websites.

Greg Brooks, Sheffield, and
Gary Lavan, Wolverhampton
(September 2020)

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CHAPTER 1: Introduction to this report

1.1 The focus and intention of the report

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? According to the Department for Education, in 2019 73% of pupils in England reached the expected standard in reading at the end of Key Stage 2 (KS2) - down by 2 percentage points from 2018 - meaning that 27% of those pupils left Primary education below the expected standard in reading (DfE, 2019). In Grammar, Punctuation & Spelling (GPS), 78% of pupils reached the expected standard, meaning 22% did not.

The intention of this book is to examine the effects of targeted school-based interventions on the development of reading, spelling and writing. Like the previous editions (see the publishing history, p.9), this 6th Edition provides information on intervention schemes for children and young people who struggle with reading, spelling, and/or writing. This book 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. 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.

More exactly, this book addresses the following two questions:

> **1) What intervention schemes are there which have been used in the UK in an attempt to boost the reading, spelling or overall writing attainment of lower-achieving pupils between the ages of 5 and 18, and have been quantitatively evaluated here?**
>
> **2) 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 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****.*

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This review analyses evidence from 52 interventions/schemes, including 17 studies which are randomised control trials (RCTs). The book is broken down into the following sections:

- Chapter 2: 30 schemes for **reading and/or spelling** at Primary-level
- Chapter 3: 7 schemes for boosting **literacy** at Primary-Secondary Transition
- Chapter 4: 17 schemes for **reading and/or spelling** at Secondary-level
- Chapter 5: 4 schemes for **writing** at Primary- and Secondary-level
- Chapter 6: 6 schemes for **young people aged 14-18, including those who have offended**
- Chapter 7: 10 schemes for pupils with specific **special educational needs and disabilities (SEND) including dyslexia/SpLD.**

Summaries of each scheme can be accessed online at:

www.theschoolpsychologyservice.com/what-works/

or

http://interventionsforliteracy.org.uk/home/interventions/

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1.2 Publishing History

1st Edition

The first edition of this book was **Brooks, G., Flanagan, N., Henkhuzens, Z. and Hutchison, D. (1998) *What Works for Slow Readers? The Effectiveness of Early Intervention Schemes*. Slough: NFER.** This went through three slightly different impressions as small errors were corrected, and was published only in hard copy.

2nd Edition

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 that was published as Enters, I. and Brooks, G. (2005b) *Hybu Darllen mewn Ysgolion Cynradd/Boosting Reading in Primary Schools*. Lundain: Yr Asiantaeth Sgiliau Sylfaenol/London: Basic Skills Agency. Both were published only in hard copy. A PDF copy can be downloaded from www.theschoolpsychologyservice.com/what-works/

3rd Edition

Both the second edition and the Enters and Brooks spin-offs fed into the third edition: **Brooks, G. (2007) *What Works for Pupils with Literacy Difficulties? The Effectiveness of Intervention Schemes*. 3rd edition. London: DCSF. http://dera.ioe.ac.uk/7123/**

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. 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. PDF copies of both the Welsh and the English versions can be downloaded from www.theschoolpsychologyservice.com/what-works/

4th Edition

Both the third edition and the 2009 Welsh spin-offs fed into the fourth edition: **Brooks, G. (2013) *What Works for Children and Young People with Literacy Difficulties? The Effectiveness of Intervention Schemes*. 4th edition. Bracknell: Dyslexia-SpLD Trust.** A PDF copy can be downloaded from www.theschoolpsychologyservice.com/what-works/

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5th Edition

The fifth edition, **Brooks, G. (2013) *What Works for Children and Young People with Literacy Difficulties? The Effectiveness of Intervention Schemes*. 5th edition. Bracknell: Dyslexia-SpLD Trust.** This was published only in electronic form and not in hard copy, and drew selectively on all the above editions. A PDF copy can be downloaded from
www.theschoolpsychologyservice.com/what-works/

6th Edition

When speaking about the 5th edition at a British Dyslexia Association conference in 2016, Greg Brooks mentioned that, if a 6th edition were ever to appear, he would not be producing it, and invited anyone interested in taking over to contact him. Gary Lavan did so, and brought in his colleague Joel Talcott. This 6th edition is the result. As always, some schemes have been dropped and others added – see section 1.4. The 6th edition is published in electronic form and a hardcopy is available here: www.theschoolpsychologyservice.com/what-works/

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1.3 Criteria for inclusion of schemes

This 6th edition features schemes intended to improve the reading and/or spelling and/or writing attainment of children aged 5-14. As in the 5th edition, there is also some coverage of 14- to 18-year-olds (including those who have offended). The overall total number of schemes covered is 52, with several schemes appearing in more than one chapter/section. Almost all the schemes also feature on the website, the exceptions being a few which do not have sufficiently analysable quantitative data. The criteria applied for inclusion in the 6th edition were:

1) The scheme must be a catch-up intervention/programme, and not an initial and/or preventive scheme

2) The scheme must be currently available in the United Kingdom

3) Schemes which are wholly or partially phonics-based must be phonetically and phonically accurate

4) The scheme's quantitative data must come from one or more studies in the United Kingdom

5) The scheme's evidence of effectiveness must be based on pre- and post-test data from research using an appropriate test(s), yielding reading or spelling ages and/or standardised scores. For the writing data used see Chapters 3 and 5

6) 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 control trials (RCTs), or quasi-experiments with well-matched treatment and comparison groups) the minimum sample size can be slightly smaller

7) It must be possible to calculate an impact measure (ratio gain or effect size) from the data – for details on these measures see Appendix A2

8) 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 0.2, that is, at least modest effectiveness.

- Again, there are some exceptions, especially for RCTs.

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1.4 The Interventions Included

1.4.1 Changes from 5th edition

Even though there have been small increases in the number of post-primary schemes, those at Primary-level continue to dominate, and to proliferate. New and tested programmes for primary/secondary transition, KS3, writing at all ages, and older teenagers are urgently needed.

Within the overall picture, the proportion of phonics-based schemes continues to grow. The Education Endowment Foundation has published a briefing on the impact of phonics overall (EEF, 2018b), focusing in particular on its positive evaluation of Switch-on Reading (EEF, 2016), and suggesting that phonics-based schemes provide an advantage of about 4 months of reading age over other approaches.

The number of randomised control trials (RCTs) has increased. Where the 4th edition listed just 6 (Brooks, 2013: 133), there were 19 RCTs within the 5th edition, and this 6th edition contains 17 RCTs where fully-analysed data are presented (and references to several more). However, most authors of schemes (where they gather quantitative data at all) continue to rely on one-group pre-test/post-test studies – which are fine in early stages, but all schemes should ideally be tested eventually using more rigorous designs.

Some previously-listed schemes no longer feature in the 6th edition (usually because they are no longer available in the United Kingdom), and some new schemes are added. In some cases where featured schemes had evidence from more than one study, some of the data have been dropped (because of small sample sizes and/or low impact measures) and others retained. In several cases new studies and data have been added to existing schemes. The details of these changes can be found in the write-up for each individual scheme.

<u>Schemes which no longer feature</u>:

- **Academy of Reading**: no longer available in the United Kingdom
- **Better Reading & Writing Progress**: no longer available
- **Better Reading Support Partners**: no longer available
- **Spellwise**: no longer available.

For anyone wishing nevertheless to follow up the details of these four schemes, they are all still logged in the 5th edition, which is available to download:

- www.theschoolpsychologyservice.com/what-works/

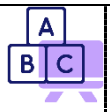
<u>New schemes which have been added to the 6th edition</u>:

- **Dyslexia Gold** *(Fluency Builder)*
- **Dyslexia Gold** *(Spelling Tutor)*

1.4.2 List of all schemes

The chapter structure and headings should provide a strong guide if you are looking for schemes in a particular area. If instead you are interested in a particular scheme you have heard about, they are listed in the table below. Page numbers indicate that scheme's first appearance in this book. Alternatively you can search for the scheme on the Interventions section of:

www.theschoolpsychologyservice.com/what-works/
or
http://interventionsforliteracy.org.uk/home/interventions/

List of all schemes					**Education Phase**		Y6-Y7 Transition	SEND	Pg
Scheme Name	Reading (Acc)	Reading (Comp)	Spelling	Writing	Primary	Secondary			
A.R.R.O.W. ™	✓	✓	✓		✓	✓			17
AcceleRead AcceleWrite	✓		✓		✓				20
Boosting Reading	✓	✓			✓	✓			24
Catch Up® Literacy	✓	✓			✓	✓		✓	27
Cued Spelling	✓	✓	✓		✓				30
Dyslexia Gold *(Fluency Builder)*	✓				✓				32
Dyslexia Gold *(Spelling Tutor)*			✓		✓	✓			34
Easyread	✓				✓	✓			36
ENABLE		✓	✓		✓				38
ENABLE PLUS	✓	✓			✓	✓			127
Everyone Can Read	✓	✓	✓				✓		100
FFT Wave 3	✓				✓				41
Grammar for Writing				✓		✓	✓		102
Helen Arkell Y7 Transition Project	✓		✓				✓		104
Hornet	✓				✓				43
Improving Writing Quality				✓			✓		106
Inference Training	✓	✓			✓	✓		✓	46
Letterbox Club	✓	✓						✓	188
Lexia	✓	✓	✓		✓				51
Paired Reading	✓	✓			✓				56
Paired Writing				✓	✓				158
Personalised Learning for Reading (PLR)		✓						✓	195
Project X Code	✓				✓				58
Rapid Plus	✓	✓				✓			131

Scheme Name	Reading (Acc)	Reading (Comp)	Spelling	Writing	Education Phase: Primary	Education Phase: Secondary	Y6-Y7 Transition	SEND	Pg
REACH *(Reading for Comprehension)*		✓						✓	203
Read Write Inc. (Phonics)	✓	✓			✓				60
Read Write Inc. (Fresh Start)		✓				✓	✓		108
Reading Recovery *(Every Child A Reader)*		✓		✓	✓				63
Reciprocal Reading	✓	✓			✓				67
Reciprocal Teaching	✓	✓			✓				69
REVI+ (Reading with Vocabulary Intervention plus)	✓		✓					✓	207
Shannon Trust: Turning Pages Reading Programme	✓							✓	169
SIDNEY	✓				✓				71
Sound Check	✓		✓		✓				73
Sound Discovery®	✓	✓	✓		✓				75
Sound Reading System	✓	✓	✓		✓			✓	78
Sound Training©	✓				✓	✓		✓	80
Summer Arts Colleges	✓							✓	174
Switch-On Reading	✓		✓		✓		✓		82
TextNow	✓							✓	176
That Reading Thing	✓					✓		✓	139
The Accelerated Reader		✓					✓		112
The CSP *(Spelling & Language Programme)*			✓		✓				84
The LIT Programme	✓	✓				✓			141
The Reading Intervention Programme	✓	✓	✓		✓			✓	199
Thinking Reading	✓					✓			143
THRASS	✓	✓	✓		✓	✓			90
Toe By Toe ®	✓				✓	✓			93
Units of Sound	✓		✓		✓	✓		✓	95
Word Wasp	✓		✓			✓			152
Wordshark		✓						✓	184
Write Away Together				✓	✓				163

Table 1.1: List of all schemes included

CHAPTER 2: Reading / Spelling at Primary-level

This chapter describes **30 relevant schemes** targeting reading and/or spelling for primary school pupils. Some general characteristics of the 30 schemes are summarised in Table 2.1.

	Scheme	Read	Spell	Y1	Y2	Y3	Y4	Y5	Y6	Length (weeks)	Weekly time requirements	1:1	Group	Pg
2.1	A.R.R.O.W.™	✓	✓	✓	✓	✓	✓	✓	✓	1½	5x 60-mins	✓		17
2.2	AcceleRead AcceleWrite	✓	✓		✓	✓	✓	✓	✓	4-8	5x 20-mins	✓		20
2.3	Boosting Reading	✓		✓	✓	✓	✓	✓	✓	10-17	3x 15-mins	✓		24
2.4	Catch Up® Literacy	✓			✓	✓	✓	✓	✓	12-44	2x 15-mins	✓		27
2.5	Cued Spelling	✓	✓		✓	✓	✓	✓	✓	6-8	3x 15-mins	✓		30
2.6	Dyslexia Gold (Fluency Builder)	✓		✓	✓	✓	✓	✓	✓	12	5x 10-mins	✓		32
2.7	Dyslexia Gold (Spelling Tutor)		✓	✓	✓	✓	✓	✓	✓	12	5x 15-mins	✓		34
2.8	Easyread	✓				✓	✓			8-16	5x 15-mins	✓		36
2.9	ENABLE (Sandwell)	✓	✓		✓	✓	✓	✓		8-22	5x 30-mins	✓	✓	38
2.10	FFT Wave 3	✓		✓	✓	✓	✓	✓		10	5x 20-mins	✓		41
2.11	Hornet	✓		✓	✓	✓	✓	✓	✓	26	5x 30-mins	✓		43
2.12	Inference Training	✓			✓	✓	✓	✓	✓	3-6	2 x 45-mins		✓	46
2.13	Lexia	✓	✓	✓	✓	✓	✓	✓	✓	10	3 x 20-mins	✓		51
2.14	Paired Reading	✓		✓	✓	✓	✓	✓	✓	9	Variable	✓		56
2.15	Project X CODE	✓			✓					20	Variable	✓		58
2.16	*Read Write Inc. (Phonics)*	✓		✓	✓	✓	✓			8-20	5x 60-mins		✓	60
2.17	Reading Recovery (Every Child A Reader)	✓		✓	✓					12-20	5x 30-mins	✓		63
2.18	Reciprocal Reading	✓						✓	✓	10	2x 30-mins		✓	67
2.19	Reciprocal Teaching	✓				✓	✓	✓	✓	16-52	2x 20-mins		✓	69
2.20	SIDNEY	✓		✓	✓					12	5x 15-mins	✓		71
2.21	Sound Check	✓	✓		✓					20	2x 20-mins		✓	73
2.22	Sound Discovery®	✓	✓		✓	✓	✓	✓	✓	10-22	3x 20-mins		✓	75
2.23	Sound Reading System	✓	✓		✓	✓	✓	✓	✓	18	3x 20-mins	✓		78
2.24	Sound Training©	✓				✓	✓	✓	✓	8	1x 45-mins		✓	80
2.25	Switch-on Reading	✓	✓	✓	✓	✓	✓	✓	✓	10-12	5x 20-mins	✓		82
2.26	The CSP Spelling and Language Programme		✓	✓	✓	✓				120	5x 20-mins		✓	84
2.27	The Reading Intervention Programme	✓	✓	✓	✓	✓	✓	✓	✓	12-25	2x 30-mins	✓	✓	86
2.28	THRASS	✓	✓		✓	✓	✓	✓	✓	13-26	5x 30-mins		✓	90
2.29	Toe by Toe®	✓		✓	✓	✓	✓	✓	✓	24	5x 60-mins	✓		93
2.30	Units of Sound	✓			✓	✓	✓	✓		20	Variable	✓		95

Table 2.1: General characteristics of the Primary-level schemes for reading and/or spelling

Each entry contains an outline description of the scheme itself, followed by a few details of its evaluation, results and effectiveness. References and contact details are provided for each scheme.

Within the summary of each scheme there is a summary table, to enable comparison between schemes.

Example Scheme Summary Table			Impact			
			modest	useful	substantial	remarkable
	**Reading (Accuracy)**	*Ratio Gain* **4.5**				✓✓✓✓
		Effect size **1.25**				✓✓✓✓
	**Reading (Comp)**	*Ratio Gain* **2.2**		✓✓		
		Effect size **n/a**				
	**Spelling**	*Ratio Gain* **2.4**		✓✓		
		Effect size **0.84**			✓✓✓	
	**Writing**	*Ratio Gain* **1.9**	✓			
		Effect size **n/a**				

Table 2.2: Example of summary tables

The table indicates the potential impact of a scheme based on the analyses of data which have been made available. Where a scheme has data available from more than one study, the table will show the largest impact measure obtained from across all of the available data for the relevant educational phase, and is therefore suggestive of the *potential* impact of the scheme at that level.

Two statistical analyses have been utilised when measuring the impact of schemes: Ratio Gain, and Effect Size. (For a description of how these are calculated, see Appendix A2, p.233-234).

The descriptors used throughout this book are as follows:	Impact			
	modest	useful	substantial	remarkable
Ratio Gain	**1-2** ✓	**2-3** ✓✓	**3-4** ✓✓✓	**4 +** ✓✓✓✓
Effect size	**0.2-0.5** ✓	**0.5-0.8** ✓✓	**0.8-1.0** ✓✓✓	**1 +** ✓✓✓✓

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2.1 A.R.R.O.W.™ *(Aural-Read-Respond-Oral-Write)*

A.R.R.O.W.™ *(Aural-Read-Respond-Oral-Write)*			**Impact**			
			modest	useful	substantial	remarkable
	**Reading (Accuracy)**	*Ratio Gain*	**32.0**			✓✓✓✓
		Effect size	**n/a**			
	**Reading (Comp)**	*Ratio Gain*	**44.0**			✓✓✓✓
		Effect size	**n/a**			
	**Spelling**	*Ratio Gain*	**16.0**			✓✓✓✓
		Effect size	**n/a**			

Description

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 hear their own voices can help some children make good progress. His system uses computer software with headphones to provide personalised many-layered programs tailored to each child's particular needs. 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. Each mini-exercise ends with the requirement that the child writes down the piece of text. Each child should ideally receive the program for one hour a day for ten consecutive school days. One teacher or teaching assistant can supervise as many children as the school has laptops for. The scheme is particularly appropriate for children with reading or spelling weaknesses, but has also been used as a whole-class programme.

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 available, data were analysed from 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 (unpublished details supplied by Colin Lane). The studies show **remarkable** impact for reading accuracy and reading comprehension, and substantial to **remarkable** impact for spelling.

Contact details for A.R.R.O.W.™ *(Aural-Read-Respond-Oral-Write)*
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A.R.R.O.W. ™ *(Aural-Read-Respond-Oral-Write)*: *Detailed Evaluations*	
Study:	Bristol 2008
Main reference:	Lane (2010), unpublished data and details supplied by Colin Lane

Research design:	One-group pre-test/post-test study
Age-range:	Y6
Type of children:	Mixed-ability: 'All the children in Y6 in one primary school in Bristol'
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.
N of experimental group:	85
Length of intervention in weeks:	2
Tests used:	WORD (Wechsler Objective Reading Dimension)

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

	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

Contact details for A.R.R.O.W.™ *(Aural-Read-Respond-Oral-Write)*
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A.R.R.O.W. ™ *(Aural-Read-Respond-Oral-Write)*: *Detailed Evaluations*	
Study:	England and Wales 2007-2010, 2010-2015
Main reference:	Lane (2010), unpublished data and details supplied by Colin Lane

Research design:	Accumulated data from numerous one-group pre-test/post-test studies
Age-range:	Y1-6
Type of children:	Low attainment
Starting and ending levels and progress:	Given the wide chronological age-range, the three available pre-test averages imply 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.
N of experimental group:	(2007-10) 361 in 27 schools (2010-15) 550 in 46 schools
Length of intervention in weeks:	2
Tests used:	Schonell Graded Word Reading Test, Schonell Spelling Test

Pre- and post-test average reading/spelling ages in years and months (spelling ages not stated for 2007-10), gains in months of r.a./s.a. (s.d's not stated), and ratio gains:

		pre	**post**	**gain**	**RG**
2007-10	reading accuracy	8:11	9:7	8	16.0
	spelling			6	12.0
2010-15	reading accuracy	8:8	9:5	9	18.0
	spelling	8:6	9:0	6	12.0

Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

Contact details for A.R.R.O.W.™ *(Aural-Read-Respond-Oral-Write)*
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2.2 AcceleRead AcceleWrite

AcceleRead AcceleWrite				Impact			
				modest	useful	substantial	remarkable
	**Reading (Accuracy)**	*Ratio Gain*	**16.1**				✓✓✓✓
		Effect size	**0.55**		✓✓		
	**Reading (Comp)**	*Ratio Gain*	**7.7**				✓✓✓✓
		Effect size	**n/a**				
	**Spelling**	*Ratio Gain*	**9.8**				✓✓✓✓
		Effect size	**n/a**				

Description

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, now available as an iPad app. The app provides 'virtual' cards, each with a series of sentences which the student reads one by one until they have memorised the sentence. The student then taps on the screen to input the sentence exactly as it appeared to them. The integrated text-to-speech function enables them to listen to what they have typed to check for errors. The process is repeated until the sentence is typed correctly and they can move on to the next level. There are eight levels of increasing difficulty and the student's progress is tracked, showing how many attempts were made at each level and which levels have been completed.

Evaluation

The original target group was children with dyslexic-type difficulties, but the programme is now used with children with other forms of literacy difficulty. 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. Pupils with reading difficulties from Primary schools and Secondary schools took part (but because the majority were Primary aged, and separate data were not given for the various year groups, this scheme has been listed only under Primary). Results were available from 3 studies, with children making between useful and **remarkable** gains in reading accuracy, and **remarkable** gains in reading comprehension and in spelling.

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AcceleRead AcceleWrite: *Detailed Evaluations*	
Study:	Jersey 1993
Main reference:	Jersey Advisory Service (1993)

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 Jersey evaluation was carried out by Mel Goodyear, Jersey Advisory Service, who coordinated the project, assisted by Martin Miles.

Research design:	One-group pre-test/post-test study
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)
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 modest gain. By post-test the standardised score was at the national norm, and follow-ups showed continuing improvements beyond that; these pupils should therefore have been equipped to cope with the curriculum.
N of experimental group:	61 in 15 primary & 4 secondary schools
Length of intervention in weeks:	4
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 size for post-test vs. pre-test only calculated using s.d. of standardisation sample**:**

	Average score	**Gain**	**Effect size**
pre	92.4		
post	100.7	8.3	0.55
10-week follow-up	103.0	10.6	
6-month follow-up	105.7	13.3	

Effect sizes:	0.55 (modest)
Statistical significances:	Were not stated and could not be calculated

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AcceleRead AcceleWrite: *Detailed Evaluations*	
Study:	Devon 2002
Main reference:	Unpublished data supplied by Martin Miles

Research design:	One-group pre-test/post-test study
Age-range:	'Older KS2'
Type of children:	Low attainment ('identified as experiencing difficulties with reading and/or spelling')
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.
N of experimental group:	30
Length of intervention in weeks:	4
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 ratio gains:

	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

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AcceleRead AcceleWrite: *Detailed Evaluations*	
Study:	Wiltshire 2005-2006
Main reference:	Unpublished data supplied by Sarah Couzens

Research design:	One-group pre-test/post-test study
Age-range:	Y3 – Y6
Type of children:	Low attainment
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.
N of experimental group:	149 (N of schools not stated)
Length of intervention in weeks:	4
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 ratio gains:

	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

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2.3 Boosting Reading *(at Primary)*

Boosting Reading			Impact			
			modest	useful	substantial	remarkable
	**Reading (Accuracy)**	*Ratio Gain*	**3.6**		✓✓✓	
		Effect size	**n/a**			
	**Reading (Comp)**	*Ratio Gain*	**6.2**			✓✓✓✓
		Effect size	**n/a**			

Description

Boosting Reading is a targeted, time-limited, one-to-one intervention for pupils in Y1–Y9 using a structured lesson format, but not scripted. As a reading intervention, it focuses on the use and application of key skills whilst reading continuous text. Programmes are delivered by trained Teaching Assistants, and it is designed to improve the use of reading strategies and develop understanding, whilst reading continuous text. This enables pupils to become successful, independent readers who read with enjoyment. Each pupil selected for the programme works with a trained adult for 15 minutes, 3 times a week, for 10 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.

Evaluations

For this edition, two datasets are presented for Primary-level, and two datasets for Secondary level (see section 4.2), drawn from use across 13 local authorities. In the first Primary dataset, all 6 year groups achieved ratio gains of over 4.0, demonstrating **remarkable** progress for overall reading age. Furthermore, the evidence from dataset 2 indicates that whilst the focus of the programme is improving continuous text reading, this reading and problem solving in context also has a significant impact on word reading skills. In this second dataset, 3 year groups achieved ratio gains of up to 3.6; indicating **substantial** impact for reading accuracy.

The Secondary-level datasets show **remarkable** progress in comprehension and overall reading age.

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Boosting Reading: *Detailed Evaluations*	
Study:	Reading age data from 12 LAs using 12 different tests to calculate Overall Reading Age; 2013-14
Main reference:	Unpublished data supplied by Clare Reed and Jan Hilditch

Research design:	One-group pre-test/post-test study
Age-range:	Y1-Y6
Type of children:	Low attainment
Starting and ending levels and progress:	In the absence of pre- and post-test data it is not possible to characterise the starting and ending levels. However, all 6 RGs are remarkable.
N of experimental group:	568
Length of intervention in weeks:	10 (2.5 months used in calculating RGs)
Tests used:	12 in all, including York Assessment of Reading Comprehension (YARC), Neale Analysis, NFER, Salford, Suffolk and PM Benchmark

Year groups, Ns, average gains in Overall Reading Age in months (s.d's and pre- and post-test data not stated), and ratio gains:

Year	N	ave. gain	RG
Y1	56	14.2	5.7
Y2	132	12.3	4.9
Y3	84	13.0	5.2
Y4	82	14.9	6.0
Y5	89	12.5	5.0
Y6	125	15.0	6.0

Additional data showing average gain in comprehension in months of r.a. (s.d's and pre- and post-test data not stated), and ratio gain:

ave. gain	RG
15.6	6.2

Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

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Boosting Reading: *Detailed Evaluations*	
Study:	Reading accuracy data from multiple schools in 1 LA using same test throughout; 2013-2014
Main reference:	Unpublished data supplied by Clare Reed and Jan Hilditch

Research design:	One-group pre-test/post-test study
Age-range:	Y1-Y5
Type of children:	Low attainment
Starting and ending levels and progress:	In the absence of pre- and post-test data it is not possible to characterise the starting and ending levels. However, all 3 RGs are useful or substantial.
N of experimental group:	459
Length of intervention in weeks:	12 (3 months used in calculating RGs)
Tests used:	British Ability Scales Word Reading (BAS)

Year groups, Ns, average gains in word reading accuracy in months of r.a. (s.d's and pre- and post-test data not stated), and ratio gains:

Year	N	ave. gain	RG
Y1	312	6.6	2.2
Y4	82	8.7	2.9
Y5	65	10.7	3.6

Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

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2.4 Catch Up® Literacy

Catch Up® Literacy			Impact			
			modest	useful	substantial	remarkable
 Reading (Accuracy)	*Ratio Gain*	**3.4**			✓✓✓	
	Effect size	**1.11**				✓✓✓
 Reading (Comp)	*Ratio Gain*	**2.3**		✓✓		
	Effect size	**n/a**				

Description

Catch Up® Literacy was initially developed in 1998 at Oxford Brookes University, in partnership with the Caxton Trust. 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. It 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.

Evaluations

Data from a pilot study and national data have been used here to evaluate Catch Up® Literacy. National data are from use with 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 here as being mainly Primary. The results show useful to **remarkable** progress in reading. In 2013 the Education Endowment Foundation commissioned an independent RCT evaluation from NFER, as part of its suite of 24 RCTs investigating how to boost literacy at primary/secondary transition (Rutt, 2015). The EEF then evaluated a revised model of the programme in 2017, which was designed to be delivered to a larger number of schools at the same time, and which was aimed at pupils in years 4 and 5, rather than pupils moving from primary to secondary school. This second study found no evidence that Catch Up® Literacy had an impact on pupils' reading comprehension outcomes when compared to 'business as usual' teaching assistant support. There is mixed evidence across the two EEF trials of Catch Up® Literacy. Due to the lack of impact in their second trial, the EEF will be removing Catch Up® Literacy from the list of promising projects.

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Catch Up® Literacy: *Detailed Evaluations*	
Study:	National data 2002-2010
Main reference:	Holmes *et al*. (2011)

Research design:	Multiple one-group pre-test/post-test studies
Age-range:	Y2-9 (average age at beginning: 8:6)
Type of children:	Low attainment
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 7 were assessed again 7 years later using the Salford test; 89% of them achieved the test's ceiling r.a. of 10:2.
N of experimental group:	5,479 in 23 LAs across England and Wales
Length of intervention in weeks:	32.8 (average; 7.57 months used in calculating RG)
Tests used:	Salford

Pre- and post-test average r.a's, gains and s.d's, all in months, and ratio gain:

	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 sizes:	n/a
Statistical significance:	p<0.001

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Catch Up® Literacy: *Detailed Evaluations*	
Study:	Pilot Study 1997
Main reference:	Clipson-Boyles (2000)

Research design:	Partly a one-group pre-test/post-test study, partly a matched-groups three-group quasi-experiment
Age-range:	Y3
Type of children:	Low attainment (level 1 in reading in KS1 test)
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 ⅔ 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.
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 2 other sets of 3 schools; then pupils in all 3 groups of schools were chosen by the same method (6 pupils in each school who had achieved level 1 in reading in KS1 test)
Length of intervention in weeks:	10
Tests used:	Hodder & Stoughton Literacy Baseline

Pre- and post-test average scores, gains in reading accuracy and s.d's, all in months of r.a., ratio gains, 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**		**RG**	**effect**
	ave.	**(s.d.)**	**ave.**	**(s.d.)**	**ave.**	**(s.d.)**		**size**
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*

Effect sizes:	1.11 (remarkable)
Statistical significances:	Were not stated and could not be calculated

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2.5 Cued Spelling

Cued Spelling			Impact			
			modest	useful	substantial	remarkable
	**Reading (Accuracy)**	*Ratio Gain*	**2.1**		✓	
		Effect size	**n/a**			
	**Reading (Comp)**	*Ratio Gain*	**3.1**			✓✓
		Effect size	**n/a**			
	**Spelling**	*Ratio Gain*	**3.1**			✓✓
		Effect size	**n/a**			

Description

From the book 'Thinking Reading Writing', 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 10 steps, 4 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.

Extra resources are available at:
http://www.dundee.ac.uk/esw/research/resources/thinkingreadingwriting/#d.en.158378

Evaluations

Topping (2001: 196-202) summarised several studies on this technique, but none of the datasets were large enough for this book. Instead, some data from Bristol have been used: there were **substantial** gains in comprehension and spelling, and a **useful** gain in reading accuracy.

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Cued Spelling: *Detailed Evaluations*	
Study:	Bristol 2004-2005
Main reference:	Unpublished data supplied by Sue Derrington

Research design:	One-group pre-test/post-test study
Age-range:	Y2-Y6
Type of children:	SEN
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 to substantial progress.
N of experimental group:	50 in 15 schools in Bristol
Length of intervention in weeks:	8
Tests used:	NFER Individual Reading Analysis (KS1), Neale (2nd UK edition, accuracy and comprehension) (KS2), Vernon Spelling Test (both)

Gains in months of r.a./s.a. (s.d's not stated), and ratio gains:

	Gain	**RG**
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

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2.6 Dyslexia Gold *(Fluency Builder)*

	Dyslexia Gold *(Fluency Builder)*		Impact			
			modest	useful	substantial	remarkable
	**Reading (Accuracy)**	*Ratio Gain*	**2.5**	✓✓		
		Effect size	**n/a**			

Description

Fluency Builder is an online literacy intervention for pupils aged 6-12 years who are struggling to learn to read or to read fluently. It focuses on difficulties with phonological awareness experienced by these pupils: the ability to hear the individual sounds in words and quickly recall the sounds for letter shapes. Intervention sessions last for 10-20 minutes. Each session focuses on one grapheme-phoneme correspondence. The program contains 10–15 activities each day which cover phonological awareness, reading fluency, phoneme manipulation and phonics. Each grapheme-phoneme correspondence is repeated in at least 4 sessions. Pupils operate the computer software independently, with minimal supervision by teaching staff.

Evaluations

The data used for this evaluation were supplied by Liz Sedley. The intervention was intended to be delivered through 10-minute sessions every day over a period of 3 months with Key Stage 2 pupils from 4 schools. Pupils were identified by their SENCO as having a reading age of at least 12 months behind their chronological age at the start of the intervention. Analyses show **useful** improvements in reading accuracy.

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Dyslexia Gold *(Fluency Builder)*: *Detailed Evaluations*	
Study:	2018
Main reference:	The Impact of Fluency Builder on Literacy (Research by Dyslexia Gold, July 2018)

Research design:	One group pre-test/post-test study
Age-range:	Key Stage 2
Type of children:	Pupils were all identified by their SENCO as having a reading age of at least 12 months behind their chronological age
Starting and ending levels and progress:	On average pupils' reading accuracy improved by 7.5 months over the 3-month period. The RG shows useful impact.
N of experimental group:	41 pupils from 4 schools
Length of intervention in weeks:	12
Tests used:	New Salford Reading Test

Average gain in r.a. (in months) and ratio gain:

	Gain	**RG**
reading accuracy	7.5	2.5

Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

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2.7 Dyslexia Gold *(Spelling Tutor)*

	Dyslexia Gold *(Spelling Tutor)*		Impact			
			modest	useful	substantial	remarkable
	**Spelling**	*Ratio Gain*	**3.5**		✓✓✓	
		Effect size	**n/a**			

Description

Spelling Tutor is an online literacy intervention for pupils aged 6 years and above to improve spelling. It uses 'spaced repetition' to ensure spellings are stored in the long-term memory and easy to recall. Pupils use a combination of reading, writing and typing to practise spelling. Delivery is in three parts and lasts for 15 minutes daily. It requires minimal input from teaching staff.

- Part 1 – Recap

Words spelt incorrectly in previous sessions are re-tested, according to the spaced repetition algorithm.

- Part 2 – New Words

The pupil reads a short passage. Then the computer dictates the passage for the pupil to write out. The pupil then marks their work. This section lasts until the pupil has made three mistakes.

- Part 3 – Session Recap

Words spelt incorrectly this session are retested.

Spelling Tutor works by an algorithm that spaces out words pupils have spelt incorrectly and repeats them at calculated intervals to check the spelling knowledge.

Evaluations

The data used for this evaluation were supplied by Liz Sedley. The study was funded by Dyslexia Gold. In this 2018 evaluation, the intervention was intended to be delivered through 15-minute sessions every day over a period of 3 months. Pupils were identified by their SENCO as having a spelling age of at least 12 months behind the chronological age. Analyses show **substantial** improvements in spelling.

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Dyslexia Gold *(Spelling Tutor)*: *Detailed Evaluations*	
Study:	2018
Main reference:	The Impact of Spelling Tutor on Literacy (Research by Dyslexia Gold, July 2018)

Research design:	One group pre-test/post-test study
Age-range:	Y4-Y9
Type of children:	Pupils were identified by their SENCO as having a spelling age at least 12 months behind their chronological age
Starting and ending levels and progress:	On average pupils spelling improved by 10.5 months over the 3-month period. The RG shows substantial impact, the effect size less so
N of experimental group:	65 pupils from 7 schools (At the end of the trial, only data from those pupils who had a spelling age above 5 at the start of the intervention were used. This resulted in 53 pupils.)
Length of intervention in weeks:	12
Tests used:	Vernon Spelling Test
Average gain in r.a. (in months) and ratio gain: **Gain** **RG** spelling 10.5 3.5	
Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

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2.8 Easyread

Easyread			Impact			
			modest	useful	substantial	remarkable
 Reading (Accuracy)	*Ratio Gain*	**n/a**				
	Effect size	**0.94**			✓✓✓	

Description

The Easyread System for helping children learn to read and spell has been developed over the past decade or so 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. 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. 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.

Evaluations

The data evaluated here are from a 2011-2013 randomised control trial in 8 primary schools in London. The identified children were allocated randomly to an experimental group who had Easyread tutorials, or to a 'waiting list' control group who continued to receive the type of additional support normally provided by the school (and received the intervention in the remaining 2 terms of school year). Post-test data were collected after 4-months, and again after 13-months. The impact showed **substantial** progress for the experimental group in reading accuracy (decoding), phonological awareness, and rapid automatized naming as well as for the more general abilities of phonological short-term memory and executive loaded working memory. Only the reading accuracy data are tabulated below.

Secondary-level data (Section 4.5) shows substantial progress for reading accuracy.

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Easyread: *Detailed Evaluations*	
Study:	2011-2013 London
Main reference:	Unpublished data supplied by David Messer and Gilly Nash of the Open University (independent evaluation)

Research design:	Randomised Control Trial (RCT)
Age-range:	(At pre-test) 7:1-8:10, average 7:7
Type of children:	SEN (school action, school action plus or 'statemented')
Starting and ending levels and progress:	Both group's starting levels were below average. At first post-test the experimental group's average standardised score had moved much closer to the national norm and at second post-test had reached it, while the control group's scores hardly changed in either period.
N of experimental group:	(1) at pre-test and first post-test, 52 in experimental group, 43 in control group (2) at second post-test. 45 in exp, 33 in control
N of control group:	(1) at pre-test and first post-test, 43 in same 8 schools (2) at second post-test. 33 in same 6 schools
Equivalence of groups:	Randomised within schools; groups did not differ significantly at pre-test on main test or 2 others, either on larger or smaller samples
Length of intervention in weeks:	12 (approx)
Tests used:	Test of Word Reading Efficiency, form A at pre-test, form B at both post-tests

Pre- and 1st and 2nd post-test average standardised scores, gains in standardised score points, s.d's, and effect size calculated (by GB) as difference in gains divided by pooled post-test s.d.:

(1) between pre-test and first post-test**:**

		Pre-test		**1st Post-test**		**Gain**		**Effect**
Group	N	ave.	(s.d.)	ave.	(s.d.)	ave.	(s.d.)	**size**
Exps	52	89	(12)	95	(11)	6	(6)	0.68
Conts	43	93	(13)	91	(13)	-2	(7)	

(2) between pre-test and second post-test (s.d's of gains not stated):

		Pre-test		**2nd Post-test**		**Gain**	**Effect**
Group	N	ave.	(s.d.)	ave.	(s.d.)	ave.	**size**
Exps	45	87.2	(11.5)	100.3	(12.4)	13.1	0.94
Conts	33	91.1	(9.7)	93.1	(11.3)	2.0	

Effect sizes:	Effect sizes showed **useful** to **substantial** progress.
Statistical significances:	At both stages, the experimental group's gain was significantly higher than the control group's ($p<0.001$)

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2.9 ENABLE *(Enhancing Attainment in Basic Literacy)*

ENABLE *(Enhancing Attainment in Basic Literacy)*				Impact			
				modest	useful	substantial	remarkable
	**Reading (Accuracy)**	*Ratio Gain*	**2.2**		✓✓		
		Effect size	**n/a**				
	**Reading (Comp)**	*Ratio Gain*	**3.0**			✓✓✓	
		Effect size	**n/a**				
	**Spelling**	*Ratio Gain*	**3.5**			✓✓✓	
		Effect size	**n/a**				

Description

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). The Y2 version is delivered, as its name says, one-to-one; each child receives a daily 30-minute session for eight weeks. ENABLE – One to One is suitable for delivery by employed school staff (e.g. teaching assistants, learning support assistants) but can also be delivered by volunteer helpers.

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. 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 below were carried out by the original 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.

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ENABLE *(Enhancing Attainment in Basic Literacy)*: *Detailed Evaluations*	
Study:	ENABLE One-To-One, 2002
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
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
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.
N of experimental group:	100 in 15 schools
Length of intervention in weeks:	8
Tests used:	Salford Sentence Reading Test, Schonell Spelling Test

Gains in months of r.a./s.a., and ratio gains:

	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

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ENABLE (Enhancing Attainment in Basic Literacy): *Detailed Evaluations*	
Study:	ENABLE-Plus, 2000-2001
Main reference:	Bowen and Yeomans (2002)

Research design:	One-group pre-test/post-test study
Age-range:	Y3-5 (7:00-9:00 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
Starting and ending levels and progress:	These Y3-5 pupils, all with serious difficulties, were below average both pre and post, but made useful progress.
N of experimental group:	29, all in one primary school (also 14 in another primary school, not analysed here because of small sample)
Length of intervention in weeks:	22
Tests used:	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 ratio gain:

Pre	**Post**	**Gain**	**RG**
5:10	6:09	11	2.2

Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

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2.10 Fischer Family Trust Wave 3 *(FFT Wave 3)*

Fischer Family Trust Wave 3 *(FFT Wave 3)*			Impact			
			modest	useful	substantial	remarkable
 Reading (Accuracy)	*Ratio Gain*	**4.8**				✓✓✓✓
	Effect size	**n/a**				

Description

Fischer Family Trust Wave 3 (FFT Wave 3) is an early intervention for Primary-level pupils who have difficulties learning to read and write. It is based on the pedagogy and practice of Reading Recovery. FFT Wave 3 is aimed at children who are unable to access a scripted group intervention, but who do not have the depth of need that would require the support of a Reading Recovery programme. Designed to be delivered by experienced teaching assistants, 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. re-reads 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. re-reads 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.

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Fischer Family Trust Wave 3 *(FFT Wave 3)*: *Detailed Evaluations*	
Study:	Canning 2008
Main references:	Canning (2004, 2009)

Research design:	Two one-group pre-test/post-test studies
Age-range:	(2004) Y1-3; (2008) Y1-5
Type of children:	(2004) SEN with very low attainment – working at P6 to 1C (2008) very low attainment
Starting and ending levels and progress:	Pupils were below average both pre- and post-test; 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.
N of experimental group:	(2004) 67 in about 30 schools (2008) 255 in 9 LAs
Length of intervention in weeks:	10
Tests used:	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. At the time, all children in England who entered Reading Recovery were 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 ratio gains:

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

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2.11 Hornet

Hornet			Impact			
			modest	useful	substantial	remarkable
	**Reading (Accuracy)**	*Ratio Gain*	**3.5**		✓✓✓	
		Effect size	**n/a**			
	**Spelling**	*Ratio Gain*	**2.9**	✓✓		
		Effect size	**n/a**			

Description

Hornet, and its KS3 companion Word Wasp, are complementary, stand-alone, phonics-based, colour-coded reading and spelling programmes. Each is based on a single book, and each text has its own dated and diagnostic marking system. The authors assert that "The Hornet and the Word Wasp teach literacy based on the code and cipher of the English language….Teaching decoding and encoding together is the most dynamic and successful way to foster literacy."

Training is not needed, as each exercise is accompanied by easy to follow, colour coded instructions. The text is a one-to-one manual designed for school and/or home use or a mixture of the two. Hornet covers Key Stages 1 and 2. Hornet also provides a lower and slower start for the Word Wasp, with which it over-laps and integrates. It is for younger students from age 6 upwards, or for those students deemed to have more severe literacy problems. The marking system reveals any weaknesses, and the text provides the strategies to deal with them. From the initial exercises, words and passages contain only decodable or encodable words from elements that have been introduced and coached. Low-frequency words are taught early in order to engage the student fully with phonic structure.

Evaluations

Data from two studies are evaluated here. First, a 2015 study of 38 mainly primary pupils who achieved a substantial gain in reading accuracy. Second, a 2019 study of 41 mainly primary pupils who demonstrated **substantial** impact for reading accuracy and **useful** impact for spelling.

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Hornet: *Detailed Evaluations*	
Study:	London, Leeds & Highlands, 2015
Main reference:	Unpublished data supplied by Nicola Cook

Research design:	One-group pre-test/post-test study
Age-range:	5-14 (mainly primary)
Type of children:	Low attainment
Starting and ending levels and progress:	Even given the wide age-range, the starting level seems to have been well below average. The useful ratio gain will have enabled many of these pupils to get much closer to an age-appropriate level, but some would still need ongoing support.
N of experimental group:	38 in 14 schools
Length of intervention in weeks:	26.5 (average)
Tests used:	Blackwell, Burt, YARC, Helen Arkell, Salford

Pre- and post-test average r.a's and s.d's for reading accuracy in years and months, average gain and s.d. in months of r.a., and ratio gain:

pre		**post**		**gain**		**RG**
ave	**(s.d.)**	**ave**	**(s.d.)**	**ave**	**(s.d.)**	
7:7	(0:11)	9:4	(1:5)	21.6	(10.3)	3.5

Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

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Hornet: *Detailed Evaluations*	
Study:	London, Leeds & Highlands, 2019
Main reference:	Unpublished data supplied by Nicola Cook

Research design:	One-group pre-test/post-test study
Age-range:	5-14 (mainly primary)
Type of children:	Low attainment
Starting and ending levels and progress:	Most pupils started in average or below average ranges, and remarkable progress was demonstrated
N of experimental group:	41 (Reading) 31 (Spelling)
Length of intervention in weeks:	26.5 (average) (6½ months used in calculating RG)
Tests used:	A range of tests, including: Burt, Salford, Blackwell Spelling, YARC, and Schonell,

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

	pre ave	**post ave**	**gain ave**	**RG**
reading accuracy	7:6	9:4	22	3.4
spelling	7:1	8:8	19	2.9

Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

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2.12 Inference Training

Inference Training			Impact			
			modest	useful	substantial	remarkable
	Reading (Accuracy)	*Ratio Gain*	**7.6**			✓✓✓✓
		Effect size	**n/a**			
	Reading (Comp)	*Ratio Gain*	**28.6**			✓✓✓✓
		Effect size	**0.85**		✓✓✓	

Description

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

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. See Yuill and Oakhill (1988) for an overview of this research.

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

Four separate Primary-level studies are evaluated here, between 1988 and 2014. These demonstrate **remarkable** impact on accuracy and comprehension skills. Yuill & Oakhill (1988) is of particular interest because so few studies tackle comprehension improvement directly. Secondary-level data (Section 4.7) shows substantial impact.

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Inference Training: *Detailed Evaluations*

Study:	Brighton 1985-1986
Main reference:	Yuill and Oakhill (1988)

Yuill and Oakhill (1988) was a quasi-experimental study. 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.

Research design:	Complex, culminating in a 3-group partly matched-groups quasi-experiment. (*See 5th edition of What Works for fuller description*)
Age-range:	Y3
Type of children:	Mixed-ability
Starting and ending levels and progress:	All pre-test average scores were in below-average ranges. All the RGs show substantial to remarkable progress, especially by the less-skilled compre-henders who had received inference training (exps 1) or comprehension exercises (AT1). Skilled comprehenders who had received rapid decoding exercises (AT4) showed a remarkable gain.
Ns of experimental groups:	(1) 13 less-skilled comprehenders, in 5 schools (2) 13 skilled comprehenders, in same schools
Nature and Ns of alternative treatments:	(AT1) comprehension exercises for less skilled comprehenders; N=7 (AT2) comprehension exercises for skilled comprehenders; N=7 (AT3) rapid decoding practice for less skilled comprehenders; N=6 (AT4) rapid decoding practice for skilled comprehenders; N=6 All these pupils were in the same 5 schools as those in the experimental groups
Equivalence of groups:	All pre-test differences ns, except, deliberately, on comprehension
Length of intervention in weeks:	4
Tests used:	Neale, form C at pre-test, form B at post-test

Pre-test average r.a's and s.d's for comprehension in years and decimal years, gains in months of r.a. (post-test scores and s.d's and gain s.d's not given), and ratio gains:

group	N	pre-test ave.	(s.d.)	gain	RG
less-skilled comprehenders (exps1)	13	7.3	(0.3)	17.4	17.4
skilled comprehenders (exps 2)	13	8.7	(0.6)	5.9	5.9
comp. exercises for less-skilled comprehenders (AT1)	7	7.2	(0.2)	13.7	13.7
comp. exercises for skilled comprehenders (AT2)	7	8.9	(1.7)	5.4	5.4
rapid decoding practice, less-skilled c'henders (AT3)	6	7.3	(0.4)	6.0	6.0
rapid decoding practice, skilled comprehenders (AT4)	6	8.9	(0.8)	10.3	10.3

Effect sizes:	n/a
Statistical significances:	Less skilled comprehenders (exps 1) made significantly more progress than skilled comprehenders (exps 2) ($p<0.001$), and more progress than the less skilled rapid decoding group (AT3) ($p<0.05$). All other comparisons ns

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Inference Training: *Detailed Evaluations*	
Study:	Glasgow, 2001
Main reference:	McGee and Johnson (2003)

McGee and Johnson (2003) conducted a small RCT (40 children in 4 groups) in one school in Glasgow replicating Yuill and Oakhill's comparison between inference training and comprehension exercises (but not rapid decoding). All 4 groups (skilled/ less skilled x inference training/comprehension exercises) made remarkable progress in the 3 weeks of the interventions, but the less skilled comprehenders who received inference training made the most progress, and reached an age-appropriate level – replicating Yuill and Oakhill's main results.

Research design:	4-group Randomised Control Trial
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.
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
N of experimental groups:	40 (10 in each group)
Ns of alternative treatment groups:	10 in each, all from same school
Nature of alternative treatment:	Comprehension exercises
Equivalence of groups:	Randomly allocated within skilled & less skilled groups; no statistically significant difference at pre-test on reading accuracy
Length of intervention in weeks:	3 (0.7 of a month used in calculating RGs)
Tests used:	Neale (1989), Form 2 at pre-test, Form 1 at post-test

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

Group		N	pre	post	gain	RG
less-skilled	exp	10	7:6	9:2	20	28.6
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

Effect sizes:	n/a
Statistical significances:	All groups improved significantly (p=0.001). The less-skilled comprehenders had improved more than the skilled comprehenders *(if so, the figure quoted in the article, p=0.224, must be wrong)*

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Inference Training: *Detailed Evaluations*

Study:	South East England, c.2008
Main reference:	Yuill (2009)

Yuill (2009) trained 12 pairs of better and poorer comprehenders to discuss joking riddles as a means to boosting their inferencing and comprehension. The two groups combined made significantly greater progress than a matched comparison group, and ratio gains and effect sizes suggested that the poorer comprehenders had made more progress than their better-comprehending peers (despite a non-significant statistical result).

Research design:	3-group partly matched-groups quasi-experiment
Age-range:	Y3-Y4
Type of children:	Mixed-ability
Starting and ending levels and progress:	All pre- and post-test average scores were in the below average range. The difference between the RGs for the 2 experimental groups, and that between the effect sizes v the comparison group, suggest that exps 1 did make substantially more progress than exps 2, despite the ns statistical result. It is intriguing that the comparison group lost a bit of ground.
N of experimental group:	(1) 12 poorer comprehenders, in 2 primary schools (2) 12 better comprehenders, in same schools
N of comparison group:	24 children in same 2 schools
Equivalence of groups:	All pre-test differences ns, except, deliberately, between experimental groups on comprehension; comparison group matched to experimental groups' combined pre-test scores
Length of intervention in weeks:	3 on average between pre- and post-tests (0.7 of a month used in calculating RGs)
Tests used:	Neale, form B at pre-test, form A at post-test

Pre- and post-test average r.a's and s.d's for comprehension in months of r.a., gains in months of r.a. (s.d's not given), ratio gains, and effect sizes calculated (by GB) as differences in gains over pooled post-test s.d's:

group	N	pre-test		post-test		gain	RG	Effect
		ave.	(s.d.)	ave.	(s.d.)	ave.		size
exps 1	12	78.9	(7.0)	88.4	(12.6)	9.5	13.6	0.34 (exps 1 v exps 2)
exps 2	12	92.2	(12.6)	96.8	(16.9)	4.6	6.6	0.40 (exps 2 v comp)
comparison	24	84.8	(11.8)	83.9	(12.6)	-0.9	-1.3	0.85 (exps 1 v comp)

Effect sizes:	0.34-0.85 (modest to substantial)
Statistical significances:	The 2 experimental groups combined made significantly more progress than the comparison group ($p<0.01$), but the 2 experimental groups' gains did not differ significantly

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Inference Training: *Detailed Evaluations*	
Study:	Leicester 2006-2014
Main reference:	Unpublished data supplied by Jo Puttick (for 2006) and Tony Whatmuff (for 2009-11, 2013-14)

Several datasets were obtained from Leicester, where Tony Whatmuff had developed an intervention using Inference Training which was first evaluated by a group led by Jo Puttick, and then routinely monitored. A programme of twenty lessons, each of 40 minutes, was used. A 2005-06 pilot group (N=57) showed remarkable gains in both accuracy and comprehension, and the 2009-11 results from a larger group (N=204) showed a remarkable gain in comprehension. In 2009-11 data were also gathered on pupils in KS3 – see section 4.7 – and in 2015 more primary-age data were made available covering school year 2013-14, again showing remarkable gains in both accuracy and comprehension. Also in 2015 data became available on a study conducted with children on the autism spectrum – see section 7.6.

Research design:	3 one-group pre-test/post-test studies
Age-range:	(2006) Y5-6; (2009-11, 2013-14) Y3-6
Type of children:	Low attainment
Starting and ending levels and progress:	The 2013-14 cohort's average starting level for accuracy was about average for KS2, while that for comprehension (the main targeted skill) was two-thirds of a year below – but it should be realised that the older children in this group would have been well behind in both areas. All five RGs show remarkable progress.
N of experimental group:	(2006) 57 in 6 schools; (2009-11) 204 (N of schools not stated); (2013-14) 46
Length of intervention in weeks:	(2006) 6; (2009-11) 6-9, average 7.2 (1.7 months used in calculating RG); (2013-14) 8
Tests used:	Neale

Pre- and post-test average scores and s.d's in years and months of r.a. average gains and s.d's in months of r.a., and ratio gains:

Cohort		**pre**		**post**		**gain**		**RG**
		ave.	**(s.d.)**	**ave.**	**(s.d.)**	**ave.**	**(s.d.)**	
2006	accuracy					9.7		6.5
2006	comp.					13.5		9.0
2009-11	comp.					12.3		7.3
2013-14	accuracy	9:0	(1:5)	10:3	(1:6)	15.1	(11.6)	7.6
2013-14	comp.	8:4	(1:0)	10:3	(1:4)	22.0	(12.1)	11.0

Effect sizes:	n/a
Statistical significances:	(2006, 2009-11) Were not stated and could not be calculated; (2013-14) $p<0.001$ in both cases

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2.13 Lexia

Lexia				Impact			
				modest	useful	substantial	remarkable
	**Reading (Accuracy)**	*Ratio Gain*	**2.9**		✓✓		
		Effect size	**n/a**				
	**Reading (Comp)**	*Ratio Gain*	**3.0**			✓✓✓	
		Effect size	**n/a**				
	**Spelling**	*Ratio Gain*	**2.4**		✓✓		
		Effect size	**n/a**				

Description

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 catch-up intervention. Originally computer-installed, from 2010 it has been web-based and can be accessed by pupils from home as well as school; the 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 to **substantial** gains in comprehension, Cumbria demonstrated **useful** gains in reading accuracy, and York and Cumbria showed **useful** gains in spelling. A project in Darlington using the web-based system showed a useful gain in reading. An Education Endowment Foundation (EEF) evaluation of Lexia is underway, and due to publish findings in Autumn 2020.

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Lexia: *Detailed Evaluations*	
Study:	Norfolk 2003
Main reference:	Worsley (2003)

Research design:	One-group pre-test/post-test study
Age-range:	Y2-Y3
Type of children:	Low attainment (most had r.a's 2 years or more below c.a.)
Starting and ending levels and progress:	The pre- and post-test average scores were all within the below average ranges. There was useful progress in comprehension. These children would need systematic further intervention.
N of experimental group:	37 in 13 schools
Length of intervention in weeks:	10
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 ratio gain:

	pre	**post**	**gain**	**RG**
reading comprehension	5:1	5:7.4	6.4	2.6

Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

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Lexia: *Detailed Evaluations*	
Study:	York, 2005
Main reference:	Wilson and Clarke (2005)

Research design:	One-group pre-test/post-test study
Age-range:	Y2-Y6
Type of children:	Most on SEN register at School Action or School Action Plus
Starting and ending levels and progress:	The pre-test average score for comprehension was in the below average range, while the pre-test average for spelling was in the broadly average 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 low average range and these pupils would need further structured support.
N of experimental group:	42 in 7 schools
Length of intervention in weeks:	10
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 ratio gains:

	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

Contact details for Lexia
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Lexia: *Detailed Evaluations*	
Study:	Cumbria 2008-09
Main reference:	Walker (2009)

Research design:	One-group pre-test/post-test study
Age-range:	Y1-Y8
Type of children:	Low attainment
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.
N of experimental group:	78 in 11 schools
Length of intervention in weeks:	10
Tests used:	(reading) Burt; (spelling) Schonell

Gains in months of r.a./s.a. (s.d's not stated), and ratio gains:

	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

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Lexia: *Detailed Evaluations*	
Study:	Darlington 2010
Main reference:	Walker (2010)

Research design:	One-group pre-test/post-test study
Age-range:	Y2-Y6
Type of children:	Low attainment
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.
N of experimental group:	65 in 10 schools
Length of intervention in weeks:	8
Tests used:	various, including Burt, Salford, Suffolk
Gain in months of r.a. (s.d. not stated), and ratio gain: **gain** **RG** 5.45 2.7	
Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

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2.14 Paired Reading

Paired Reading			Impact			
			modest	useful	substantial	remarkable
	**Reading (Accuracy)**	*Ratio Gain* **3.4**			✓✓✓	
		Effect size **0.87**			✓✓✓	
	**Reading (Comp)**	*Ratio Gain* **4.6**				✓✓✓✓
		Effect size **0.77**		✓✓		

Description

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 given regularly. Extra resources are available at http://www.dundee.ac.uk/esw/research/resources/thinkingreadingwriting/#d.en.158378

Evaluations

This is one of the simplest schemes yet devised, and the subject of one of the largest evaluations indicating **substantial** impact on accuracy and **remarkable** impact on comprehension. 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/esw/research/resources/readon/

Topping's work has led on to other forms of Paired Learning: Cued Spelling and Paired Writing (which have entries in this report, sections 2.5 and 5.2) and Paired Thinking (which does not feature).

Contact details for Paired Reading
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Paired Reading: *Detailed Evaluations*	
Study:	Review of multiple studies 1984-87
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
Age-range:	(Y1-11); mainly primary and therefore included here and not under KS3
Type of children:	Mixed-ability
Starting and ending levels and progress:	Impact measures show substantial progress for the experimental groups in reading accuracy and remarkable progress in comprehension, while the comparison groups show useful progress. In follow-ups at less than 17 weeks, 102 children in 7 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 10 projects averaged RGs of 1.2 for accuracy and 1.4 for comprehension. Children continued to improve after the intervention, and maintained their gains.
N of experimental group:	2,372 in 155 projects in 71 schools
N of comparison group:	446 in 37 projects for main accuracy measure – for other Ns, see below
Equivalence of groups:	Not applicable to the one-group studies. Matching method in matched-groups studies not stated
N of alternative treatment group:	(some projects had alternative treatment groups, but too numerous and disparate to report here)
Length of intervention in weeks:	9 (average)
Tests used:	Many, including Burt, Holborn, Neale, New Macmillan Reading Analysis, Salford, Schonell,

	accuracy		**comprehension**	
	N	**RG**	**N**	**RG**
all experimentals	2372	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	**accuracy**	**comprehension**
N of projects (N of children not given)	34	12
effect size	0.87	0.77

Effect sizes:	useful to substantial (0.77-0.87)
Statistical significances:	All ratio gains were highly statistically significant ($p<0.001$) for both accuracy and comprehension

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2.15 Project X CODE

Project X CODE			Impact			
			modest	useful	substantial	remarkable
 Reading (Accuracy)	*Ratio Gain*	**3.1**			✓✓✓	
	Effect size	**n/a**				

Description

Project X CODE embeds synthetic phonics within a motivational character adventure series. According to the scheme's Teaching and Assessment Handbook, it is designed to combine 'systematic synthetic phonics, comprehension development, motivational 3D design and gripping stories to accelerate struggling readers' progress so that children reach expected literacy levels as soon as possible'. Flexible entry and exit points ensure that the intervention can be adapted to suit children at a range of levels. It is aimed to fit into a school's provision map for 'lighter touch' catch up support (children working either one-to-one or in a very small group with a TA). Teaching assistants attend a 3-day training programme that develops their subject knowledge and ability to deliver the intervention. School link teachers attend for 1 day to find out about how to manage it and monitor its impact.

Evaluations

In early 2014 a substantial dataset (N=219) was supplied. It showed a **substantial** gain in reading accuracy. The programme's Edge Hill University website (accessed 28/2/16) claims that 'Over 5,000 pupils in Years 1 to 8 have been supported by trained teaching assistants with Project X CODE in 400 schools.'

Contact details for Project X CODE

https://everychildcounts.edgehill.ac.uk/project-x-code/ (training)
https://global.oup.com/education/content/primary/series/projectx/project-x-code/?region=uk (materials)

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Project X CODE: *Detailed Evaluations*	
Study:	2013
Main reference:	Unpublished data supplied by Edge Hill University

Research design:	One-group pre-test/post-test study
Age-range:	Y2 (5 children in Y3-4 excluded from calculations)
Type of children:	Children who have experienced a phonics programme but are falling behind in reading
Starting and ending levels and progress:	The absence of pre- and post-test statistics means the starting and ending levels cannot be characterised. The RG shows substantial progress for reading accuracy, with a remarkable impact shown by effect size.
N of experimental group:	207
Length of intervention in weeks:	20 (4.5 months used in calculating RG)
Tests used:	Hodder Phonics and Early Reading Assessment
Average gain in sentence reading accuracy and s.d. in months, and ratio gain: **gain ave.** **(s.d.)** **RG** 14.0 (7.6) 3.1	
Effect size:	n/a
Statistical significances:	Were not stated and could not be calculated

Contact details for Project X CODE
https://everychildcounts.edgehill.ac.uk/project-x-code/ (training)
https://global.oup.com/education/content/primary/series/projectx/project-x-code/?region=uk (materials)

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2.16 *Read Write Inc.* *(Phonics)*

Read Write Inc. *(Phonics)*			***Impact***			
			modest	useful	substantial	remarkable
	**Reading (Accuracy)**	*Ratio Gain*	**3.8**		✓✓✓	
		Effect size	**n/a**			
	**Reading (Comp)**	*Ratio Gain*	**2.6**	✓✓		
		Effect size	**n/a**			

Description

Read Write Inc. (*Phonics)* is Ruth Miskin's comprehensive literacy programme for Reception, KS1 and lower KS2. Pupils in Year 5, Year 6, and KS3 not yet reading and writing confidently follow *Read Write Inc.* (*Fresh Start).*

Read Write Inc. (Phonics) is a synthetic phonics-based reading, writing and spelling programme. In order to read with fluency and understanding children need to be accurate and speedy word readers. The programme starts by teaching the first 30 phonemes and gives pupils stories to read that contain only the sounds they know. A new phoneme is introduced every day. The programme teaches the 44 phonemes and corresponding graphemes for them. It is structured and supportive, and includes decodable, age-appropriate stories and non-fiction texts. Activities associated with each text help the pupils discover and practise techniques for discussing and understanding stories and composing their own.

All staff (the headteacher, teachers and teaching assistants) are trained together by a Ruth Miskin trainer who has taught and led the programme (no cascade training is used). Alternatively, staff can attend regionally organised events individually or in groups. Training is available specifically tailored for Nursery and Special schools. A teacher leads and manages the programme in schools. For schools that have regular in-school development days with a trainer, video tutorials are available for each teaching activity.

Evaluations

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 (both accuracy and comprehension); in Haringey there was a **substantial** gain in reading accuracy.

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Read Write Inc. *(Phonics): Detailed Evaluations*	
Study:	Bristol 2004-05
Main reference:	Unpublished data supplied by Sue Derrington

Research design:	One-group pre-test/post-test study
Age-range:	Y2-Y6
Type of children:	SEND
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.
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 8
Tests used:	NFER Individual Reading Analysis (KS1), Neale (2nd UK edition, accuracy and comprehension) (KS2)
	Ratio gains reading accuracy 2.3 reading comprehension 2.6
Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

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Read Write Inc. *(Phonics): Detailed Evaluations*	
Study:	Haringey, 2003-04
Main reference:	Unpublished data supplied by Christa Rippon via Jean Gross

Research design:	One one-group pre-test/post-test studies
Age-range:	Y5-Y6
Type of children:	Low attainment; some had r.a. several years below c.a.
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 low – low-average range. They would still need further structured support.
N of experimental group:	30 in 7 schools
Length of intervention in weeks:	20 (5 months used in calculating RG)
Tests used:	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 ratio gains: **pre** 6:3 **post** 7:10 **gain** 19 **RG** 3.8	
Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

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2.17 Reading Recovery *(Every Child A Reader)*

Reading Recovery (Every Child A Reader)			Impact			
			modest	useful	substantial	remarkable
Reading (Accuracy)	*Ratio Gain*	**4.2**				✓✓✓✓
	Effect size	**1.67**				✓✓✓✓

Description

Reading Recovery is aimed at children who during 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 children receive daily 30-minute one-to-one lessons for up to 20 weeks from a specially trained teacher. Throughout the lesson the teacher's interventions, based on daily diagnoses, are carefully geared to identify and praise successes, promoting confident and independent behaviour, and a range of strategies are brought to bear whenever problems arise. Children leave the programme when reading improves to the level of the average reading group in their class (in RR parlance, 'are successfully discontinued', or more recently 'have achieved accelerated learning'), enabling them to work in class without additional support. Children who are not successfully discontinued are referred for more detailed assessment and specialist help.

In 2005 a consortium of charitable trusts and businesses provided £4.5 million over three years, matched by the D*f*ES, for a revived RR initiative in England, called 'Every Child a Reader' (ECaR). 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 2005 funding included an evaluation of ECaR based in 5 London boroughs plus five others in London which provided a comparison group. This demonstrated **remarkable** impact on reading accuracy, as did further evaluations across Britain and Ireland (2004-2005), and Bristol (2011). The 2005 study also demonstrated **remarkable** impact on writing. Detailed evaluation of the original Reading Recovery programme can be found in the 5th Edition of this book (Section 3.18) or Sylva and Hurry (1995a, b, 1996), Hurry and Sylva (1998, 2007).

Contact details for Reading Recovery
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https://www.ucl.ac.uk/reading-recovery-europe/reading-recovery

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Reading Recovery *(Every Child A Reader)*: *Detailed Evaluations*	
Study:	Every Child A Reader in London, 2005-2006
Main reference:	Burroughs-Lange (2006, 2008), Burroughs-Lange and Douëtil (2007), Every Child a Reader (undated but known to have been published in 2006), Hurry (2012), Hurry and Holliman (2009)

Research design:	Matched groups two-group quasi-experiment
Age-range:	Y1
Type of children:	Low attainment – bottom 5-6% of the national distribution
Starting and ending levels and progress:	The comparison group made less than standard progress, and was therefore falling relatively further behind. The experimental group made substantial to remarkable progress. Data from a one-year follow-up in 2007 suggested that both groups had made either standard progress or slightly more. At follow-up, the experimental group's averages were close to c.a., but the comparison group's were still about a year behind.
N of experimental group:	87 in 21 schools (5 London boroughs)
Ns of comparison groups:	147 in 21 schools (5 different London boroughs)
Equivalence of groups:	All 10 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 8 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:	between 12 and 20 weeks, according to individual pupil needs (10 months between pre- and post-tests used for calculations)
Tests used:	BASWRT, WRAPS (Word Recognition and Phonic Skills)

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), ratio gains, and effect sizes calculated using the *pooled* post-test s.d's:

			pre-test		post-test		gain	RG	Effect
Test	**group**	**N**	**ave.**	**(s.d.)**	**ave.**	**(s.d.)**			**size**
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	

Effect sizes:	Up to 1.67 (remarkable)
Statistical significances:	Both of the experimental group's post-test average scores were statistically significantly higher than the comparison group's.

Contact details for Reading Recovery
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Reading Recovery *(Every Child A Reader)*: *Detailed Evaluations*	
Study:	Reading Recovery in Britain & Ireland, 2004-2005
Main reference:	Douëtil (2006)

Research design:	One-group pre-test/post-test study
Age-range:	Y1-Y2
Type of children:	Low attainment
Starting and ending levels and progress:	The initial sample here was very large (3,566). The pre-test average shows that most of these children were non-readers. The 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 RG shows that on average they had made remarkable progress. There was a substantial gain in reading accuracy. Of the 3,566 children, 3,015 (85%) were 'successfully discontinued' or had 'achieved accelerated learning'. Evidence from (steadily smaller, but still large) follow-up groups suggested 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.
N of experimental group:	3,566 in an unknown number of schools across the 5 jurisdictions
Length of intervention in weeks:	18.5 on average (4.5 months used in calculating RG)
Tests used:	BASWRT

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

pre	**post**	**gain**	**RG**
4:10	6:5	19	4.2

Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

Contact details for Reading Recovery
International Literacy Centre at the UCL Institute of Education, University of London:
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Reading Recovery *(Every Child A Reader): Detailed Evaluations*	
Study:	Bristol, 2010-2011
Main reference:	Miles and Armstrong (2011)

Research design:	One-group pre-test/post-test study
Age-range:	Y1-Y2
Type of children:	Low attainment
Starting and ending levels and progress:	On average the children involved were non-readers at the beginning, but by the end had come close to, or reached, c.a. The data showed a remarkable impact on reading accuracy.
N of experimental group:	360
Length of intervention in weeks:	20
Tests used:	BASWRT

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

pre	**post**	**gain**	**RG**
4:10	6:6	20	4.0

Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

Contact details for Reading Recovery
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https://www.ucl.ac.uk/reading-recovery-europe/reading-recovery

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2.18 Reciprocal Reading

Reciprocal Reading				Impact			
				modest	useful	substantial	remarkable
	**Reading (Accuracy)**	*Ratio Gain*	**5.2**				✓✓✓✓
		Effect size	**n/a**				
	**Reading (Comp)**	*Ratio Gain*	**6.4**				✓✓✓✓
		Effect size	**n/a**				

Description

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.

Evaluations

A pilot study was conducted in 4 primary schools in Middlesbrough in 2011. The 48 children had comprehension ages well below their accuracy ages. They made **remarkable** progress in both accuracy and comprehension.

Contact details for Reciprocal Reading

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Reciprocal Reading: *Detailed Evaluations*	
Study:	Middlesbrough, 2011
Main reference:	Unpublished data supplied by Andy Taylor and Jill Canning

Research design:	One-group pre-test/post-test study
Age-range:	Y5-Y6
Type of children:	Low attaining children with reading comprehension ages significantly below their reading accuracy ages
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 4 months ahead of c.a. in accuracy and only 3 months behind in comprehension.
N of experimental group:	48
Length of intervention in weeks:	10 (2.5 months used in calculating RGs)
Tests used:	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 ratio gains:

	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

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2.19 Reciprocal Teaching

Reciprocal Teaching				Impact			
				modest	useful	substantial	remarkable
	Reading (Accuracy)	*Ratio Gain*	**2.2**		✓✓		
		Effect size	**n/a**				
	Reading (Comp)	*Ratio Gain*	**3.7**			✓✓✓	
		Effect size	**n/a**				

Description

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 modeled the key activities of summarising (self-review), questioning (making up a question on the main idea), clarifying and predicting. The teacher thereby modeled 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.

Evaluations

Data provided for previous editions of 'What Works' are evaluated here. 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** gain in comprehension.

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Reciprocal Teaching: *Detailed Evaluations*	
Study:	Haringey, 2002-2003
Main reference:	Unpublished data supplied by Christa Rippon

Research design:	One-group pre-test/post-test study
Age-range:	Y3-Y6
Type of children:	Low attainment
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.
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)
Tests used:	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 ratio gains:

	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

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2.20 SIDNEY *(Screening and Intervention for Dyslexia, Notably in the Early Years)*

SIDNEY *(Screening and Intervention for Dyslexia, Notably in the Early Years)*			***Impact***			
			modest	useful	substantial	remarkable
 **Reading (Accuracy)**	*Ratio Gain*	**2.3**		✓✓		
	Effect size	**n/a**				

Description

Hampshire primary schools are asked to screen all pupils in the last term of their Reception Year to identify pupils who are likely to experience literacy difficulties. During their first term in Year 1, pupils so identified work through the SIDNEY intervention programme, which was written jointly by local advisers and educational psychologists. The intervention programme was designed to be used by a learning support assistant (LSA) for 15 minutes per day on a one-to-one basis. The aim is that pupils should progress towards age-expected skill-levels, and 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).

Evaluations

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.

Contact details for SIDNEY
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SIDNEY *(Screening and Intervention for Dyslexia, Notably in the Early Years)*: *Detailed Evaluations*	
Study:	Hampshire, 2004
Main reference:	Norgate and Bentote (2005) and unpublished data supplied by Roger Norgate

Research design:	One-group pre-test/post-test study
Age-range:	Y1-Y2
Type of children:	Low attainment, on average
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.
N of experimental group:	66 children in 14 schools
Length of intervention in weeks:	12
Tests used:	WRAPS

Pre- and post-test average WRAPS ages in years and months, gains in accuracy in months of WRAPS age, s.d's, and ratio gain:

	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

Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

Contact details for SIDNEY
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2.21 Sound Check

Sound Check			Impact			
			modest	useful	substantial	remarkable
	**Reading (Accuracy)**	*Ratio Gain*	**n/a**			
		Effect size	**0.53**	✓✓		
	**Spelling**	*Ratio Gain*	**n/a**			
		Effect size	**0.37**	✓		

Description

The Primary Literacy Project in Key Stages 1 and 2 (known as the Sound Check Project) aimed to identify the problems faced by children who had scored less than 32/40 in the Y1 phonics test, and boost their achievement before they were re-tested a year later. It brought together three third sector organisations, the British Dyslexia Association, Dyslexia Action, and Springboard for Children. The Sound Check programme is a 20-week intervention delivered twice weekly to groups of up to 5 children by a Dyslexia Action trained specialist teacher. The programme selected for the intervention was the Active Literacy Kit (ALK), which has a track record of supporting children who experience literacy difficulties. The programme involves a preliminary Placement Test, designed to be administered on an individual basis. After analysis of the results, a structured programme of learning follows in the form of a specified set of exercises, some of which are timed in order to build the skills needed for automatic, fluent and accurate reading and spelling. The exercises are active and multi-sensory in the sense that the child must respond physically and verbally and be engaged totally in the learning process. Carefully structured activities cover phonological awareness, word recognition, phonics, graphic knowledge and spelling. The ALK covers basic sound-to-letter correspondence through fluent reading and spelling of consonant-vowel-consonant words (e.g. *cat, mat, fat*). For the Sound Check Project, additional resources were developed to support children who were to re-take the phonics test in Y2.

Evaluations

Lorna Hamilton of York St John University conducted a study of the project in the two school years 2012-14. Data from 323 children assessed in the second year showed a **useful** gain in single word reading and a **modest** gain in single word spelling.

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Sound Check: *Detailed Evaluations*	
Study:	York St John University, 2013-2014
Main reference:	Hamilton (2015), with supplementary statistical information supplied by Max Kowalewski

Research design:	One-group pre-test/post-test study
Age-range:	Y2
Type of children:	Pupils who had scored less than 32/40 on 2013 Y1 phonics test
Starting and ending levels and progress:	The starting levels were almost a full s.d. below the norm, while the ending levels were only one third of an s.d. below. The effect sizes confirm the useful gains.
N of experimental group:	323 in 27 schools in Leeds, Manchester and Salford, and Swindon
Length of intervention in weeks:	20
Tests used:	Dyslexia Portfolio Tests, sub-tests of single word reading and spelling

Average pre- and post-test and gain scores and s.d's in standardised score points, and effect sizes:

Test	Pre-test average (s.d.)	Post-test average (s.d.)	Average gain (s.d.)	Effect size
Single Word Reading	87.41 (11.40)	95.30 (11.19)	7.90 (7.60)	0.53
Single Word Spelling	88.66 (8.91)	94.18 (9.68)	5.59 (7.93)	0.37

Effect sizes:	0.37 – 0.53 (modest to useful)
Statistical significances:	Were not stated and could not be calculated

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2.22 Sound Discovery®

Sound Discovery®			Impact			
			modest	useful	substantial	remarkable
	Reading (Comp)	*Ratio Gain*	**3.1**		✓✓✓	
		Effect size	**n/a**			
	Spelling	*Ratio Gain*	**2.0**	✓✓		
		Effect size	**n/a**			

Description

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®: fast-paced and consisting of appropriate multi-sensory activities, and 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, and continuing with increasing complexity.

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 2006-07. The Norfolk study found a **substantial** gain for comprehension, and the Bedfordshire study suggests **useful** progress in spelling.

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Sound Discovery®: *Detailed Evaluations*	
Study:	Norfolk, 2005
Main reference:	Worsley (2005)

Research design:	One-group pre-test/post-test study
Age-range:	Y2-Y5
Type of children:	Pupils at what was called 'School Action+' of the Code of Practice; pupils in the process of Statutory Assessment and pupils with 'Statements' (as they were called at the time of the study)
Starting and ending levels and progress:	Both average scores were in the below average ranges, but the progress made was substantial.
N of experimental group:	38 in 11 schools
Length of intervention in weeks:	12
Tests used:	Salford Sentence Reading Test, 3rd edn

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 ratio gain:

Pre	**Post**	**Gain**	**RG**
5:9	6:6	9	3.1

Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

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Sound Discovery®: *Detailed Evaluations*	
Study:	Bedfordshire 2006-2007, 2005
Main reference:	Unpublished data supplied by Jo Padbury via Marlynne Grant

Research design:	One-group pre-test/post-test study
Age-range:	Y5
Type of children:	Pupils at what was called 'School Action+' of the Code of Practice; pupils in the process of Statutory Assessment and pupils with 'Statements' (as they were called at the time of the study)
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.
N of experimental group:	126 in 1 middle school
Length of intervention in weeks:	10 (4 months between pre- and post-test, Sept 2006-January 2007, used in calculating RG)
Tests used:	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 ratio gain:

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 sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

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2.23 Sound Reading System

Sound Reading System				Impact			
				modest	useful	substantial	remarkable
	**Reading (Accuracy)**	*Ratio Gain*	**6.7**				✓✓✓✓
		Effect size	**n/a**				
	**Reading (Comp)**	*Ratio Gain*	**7.1**				✓✓✓✓
		Effect size	**n/a**				
	**Spelling**	*Ratio Gain*	**6.4**				✓✓✓✓
		Effect size	**n/a**				

Description

The *Sound Reading System* is a synthetic phonics reading and spelling programme based on the work of Professor Diane McGuinness, who has been actively involved in its development, utilising research data spanning 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. Pupils learn that the English writing system is a code, and precisely how this code works. The intervention is delivered 1-1, by specially trained teachers, LSAs, Teaching Assistants and SENCos.

Evaluations

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. Additional data provided from small studies in 2014 and 2019 have demonstrated similar impact. For some results from a Young Offender Institution see Section 6.3.

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Sound Reading System: *Detailed Evaluations*	
Study:	2003-2007
Main reference:	Unpublished data supplied by Fiona Nevola and Diane McGuinness

Research design:	One-group pre-test/post-test study
Age-range:	Y2-adult
Type of children:	Low attainment
Starting and ending levels and progress:	Without pre- and post-test data it is impossible to characterise the starting and ending levels. However, the ratio gains show remarkable progress in all three areas.
N of experimental group:	140
Length of intervention in weeks:	18 on average (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

Average gains in months of reading/spelling ages (s.d's not stated), and ratio gains:

	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

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2.24 Sound Training ©

(formerly Sound Training for Reading)

Sound Training ©			Impact			
			modest	useful	substantial	remarkable
 Reading (Accuracy)	*Ratio Gain*	**9.4**				✓✓✓✓
	Effect size	**0.58**		✓✓		

Description

This scheme was developed by Katy Parkinson in Middlesbrough to help pupils in KS3 with reading difficulties. It is now used in KS2 and KS4 as well – see section 4.10 for a description of its use in secondary schools. The primary version is delivered to groups of 4 pupils, for 45 minutes once per week over a period of 8 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.

Evaluations

Primary-level data are presented below. These were carried out by the author by gathering, over 5 years, three sets of data from schools using the scheme. The ratio gains for accuracy in all three studies were **remarkable**; the effect size calculated was **useful**.

Secondary-level data are presented in Section 4.10, these showed substantial to **remarkable** impact.

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Sound Training ©: *Detailed Evaluations*	
Study:	2010-2015
Main reference:	Unpublished data supplied by Katy Parkinson

Research design:	Three one-group pre-test/post-test studies
Age-range:	(2010-11) Y5-6; (2011-12) 'KS2'; (2012-15) Y4-6
Type of children:	Mixed-ability mainstream pupils, none statemented but with reading ages between 1 and 3 years below chronological age
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 all three cohorts were at or near the average for their age.
N of experimental group:	(2010-11**)** 52 in 6 schools (2011-12) 102 in 10 schools (2012-15) 802 in a large number of schools
Length of intervention in weeks:	8 (2 months used in calculating RGs)
Tests used:	(2010-12) GL Assessment single word reading (2012-15) Wide Range Achievement Test 4th ed.

(2010-12) Pre- and post-test average r.a's and s.d's in years and months, average gains and s.d's in reading accuracy in months of r.a., and ratio gains:

cohort		**N**	**pre**		**post**		**gain**		**RG**
			ave.	**(s.d.)**	**ave.**	**(s.d.)**	**ave.**	**(s.d.)**	
2010-11	r.a	52	8:5	(0:9)	10:0	(1:7)	19	(15)	9.4
2011-12	r.a	102	8:7	(1:1)	10:1	(1:11)	17	(12)	8.7

(2012-15) Pre- and post-test average r.a's and s.d's in years and decimal years, pre- and post-test averages and s.d's in standardised score points (ssp), average gains and s.d's in same units, ratio gain, and effect size calculated (by GB) as average gain in ssp divided by the s.d. of the test (15.0**)**:

N		**pre**		**post**		**gain**		**RG**	**effect**
		ave.	**(s.d.)**	**ave.**	**(s.d.)**	**ave.**	**(s.d.)**		**size**
802	r.a.	8.1	(0.7)	9.5	(1.7)	16	(16)	8.0	
	ssp	83.0	(6.7)	91.8	(9.8)	8.7	(8.4)		0.58

Effect size:	0.58 (useful)
Statistical significances:	p<0.001 in all cases

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2.25 Switch-on Reading

Switch-on Reading			Impact			
			modest	useful	substantial	remarkable
Reading (Accuracy)	*Ratio Gain*	**3.0**			✓✓✓	
	Effect size	**0.37**	✓			
Spelling	*Ratio Gain*	**2.7**		✓✓		
	Effect size	**0.53**		✓✓		

Description

This is an intensive 10- or 12-week intervention. It was developed in Nottinghamshire over a number of years as part of the Every Child a Reader initiative, and is inspired by Reading Recovery. It is delivered by staff, most commonly teaching assistants, who have been trained in the approach. Its purpose is to improve pupils' reading accuracy, comprehension and fluency, and so close the reading achievement gap for vulnerable children working below age-expected levels. It has also been shown to benefit spelling. Pupils attend daily 20-minute reading sessions over the course of one term, on a withdrawal basis.

Evaluations

In 2011 a small scale (92 pupils) randomised control group developer-led research project in 8 Nottingham City schools showed Switch-on Reading to have a **substantial** impact on reading accuracy and a **useful** impact on spelling for pupils in KS2.

In 2012 the Education Endowment Foundation commissioned an independent RCT evaluation of this scheme from Durham University, as part of their suite of 24 RCTs investigating how to boost literacy at primary/secondary transition. The effect size showed a **modest** benefit to the experimental group's reading. For the RCT evaluation of this scheme at primary/secondary transition (with a **modest** impact for comprehension) see section 3.6.

A further and larger trial was commissioned by the EEF, and completed in 2018. The EEF reported in 2018 that *"In a previous EEF trial, Switch-on Reading was found to deliver around 3 months additional progress in reading outcomes in Year 7. In that trial, the Switch-on training was delivered by its original developers. This new project was designed to test whether Switch-on Reading (and Switch-on Reading and Writing) would have an impact using the type of delivery model that would be needed to make it available to a large number of schools, without direct developer involvement".*

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Switch-on Reading: *Detailed Evaluations*	
Study:	Nottingham, 2011
Main reference:	Coles (2012)

Research design:	Randomised control trial (RCT)
Age-range:	Y1-Y6
Type of children:	Working well below age-expected levels
Starting and ending levels and progress:	The pre- and post-test means are very low for samples drawn across the whole primary age-range – but so are the post-test means, even given the useful to substantial impact measures
N of experimental group:	49 in 8 primary schools in Nottingham (+ control group of 43 in same schools)
N of control group:	43 in same schools
Equivalence of groups:	At pre-test mean reading scores were identical; mean spelling scores differed by 1 month (ns)
Length of intervention in weeks:	12 (3 months used in calculating RGs)
Tests used:	Schonell Graded Word Reading Test (1971); Daniels and Diack Word Spelling Test (1977)

Average pre- and post-test and gain scores in years and months of r.a./s.a., s.d's in months of r.a./s.a., ratio gains, and effect sizes:

		Word reading			**RG**	**Effect size**	**Word spelling**			**RG**	**Effect size**
Group	N	Pre	Post	Gain			Pre	Post	Gain		
Exp.	49	6:0 (10.5)	6:9 (11.5)	0:9 (6.1)	3.0	0.37	6:5 (10.4)	7:1 (10.6)	0:8 (5.5)	2.7	0.53
Cont.	43	6:0 (10.5)	6:5 (10.5)	0:5 (5.0)	1.7		6:4 (8.4)	6:7 (8.4)	0:3 (4.4)	1.0	

Effect sizes:	0.37-0.53 (modest to useful)
Statistical significances:	Both experimental group's gains significantly greater than control group's ($p<0.001$)

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2.26 The CSP Spelling and Language Programme

(formerly known as The Complete Spelling Programme)

The CSP Spelling and Language Programme			Impact			
			modest	useful	substantial	remarkable
	Spelling	*Ratio Gain*	**n/a**			
		Effect size	**1.19**			✓✓✓✓

Description

This is a structured and developmental programme designed for use in the 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, which 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.

Evaluations

The first author of the scheme, Sharon McMurray, carried out a two-group quasi-experiment in 4 schools in Northern Ireland in 1999-2001. The experimental group made remarkable progress, and significantly outperformed the comparison group.

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The CSP Spelling and Language Programme: *Detailed Evaluations*	
Study:	Northern Ireland, 1999-2001
Main reference:	McMurray (2006)

Research design:	Matched-groups two-group quasi-experiment
Age-range:	Y2-4 (England and Wales equivalent = Y1-3)
Type of children:	Mixed ability
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 1 s.d. above the norm.
N of experimental group:	43 in 2 schools in Northern Ireland (+ comparison group of 38 in 2 other schools in Northern Ireland)
N of comparison group:	38 in 2 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)
Tests 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 size calculated as difference in gains divided by pooled post-test s.d.:

	pre		**post**		**gain**	**effect**
group	**ave.**	**(s.d.)**	**ave.**	**(s.d.)**	**ave.**	**size**
experimental	94.74	(12.22)	113.20	(11.02)	18.46	1.19
comparison	95.42	(11.56)	100.26	(12.26)	4.84	

Effect sizes:	1.19 (remarkable)
Statistical significances:	p<0.0001

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2.27 The Reading Intervention Programme

The Reading Intervention Programme				Impact			
				modest	useful	substantial	remarkable
	Reading (Accuracy)	*Ratio Gain*	**4.0**				✓✓✓✓
		Effect size	**0.54**		✓✓		
	Reading (Comp)	*Ratio Gain*	**n/a**				
		Effect size	**0.77**		✓✓		
	Spelling	*Ratio Gain*	**2.6**		✓✓		
		Effect size	**n/a**				

Description

The Reading Intervention Programme is the premier scheme to have arisen from the late 1980s/early 1990s Cumbria Reading with Phonology study. Chapter 7 contains more detailed information regarding the history and evolution of this body of work. 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. The intervention runs for approximately 20 weeks, with pupils attending sessions twice per week.

Evaluations

Three evaluations are presented here. 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). This was followed by additional evaluations of the intervention being used widely in Cumbria, following that initial study. The Cumbria studies demonstrated **useful** impact on reading accuracy and spelling. 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 to **remarkable** progress in reading accuracy.

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The Reading Intervention Programme: *Detailed Evaluations*

Study:	(The original) Cumbria Reading with Phonology Project
Main reference:	Hatcher, Hulme and Ellis (1994)

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.

Research design:	4-group matched-groups quasi-experiment
Age-range:	Y2
Type of children:	Low attainment (reading quotient, r.a./c.a. x 100, on Carver test less than 86; those with reading quotient less than 71 and percentile rank below 25 on Raven's Coloured Progressive Matrices (1965) were excluded)
Starting and ending levels and progress:	At pre-test all average scores were in the below average ranges, 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. **Follow-up:** All groups were re-tested one year after the end of the intervention. 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.
N of experimental group:	32 received both reading programme and Phonological Training (+ 92 in 3 comparison groups)
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)
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; 7 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)

Gains (in months of r.a.), and effect sizes:

	Accuracy		**Comp**	
group	**gain (months)**	**effect size**	**gain (months)**	**effect size**
Experimentals	12.4	0.54	13.2	0.77
AT1	8.9	0.29	8.2	0.26
AT2	7.6	0.10	6.1	0.06
No treatment	6.6		5.6	

Effect sizes:	0.54-0.77 (useful)
Statistical significances:	On both post-test measures, experimentals' gains were significantly better than controls

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The Reading Intervention Programme: *Detailed Evaluations*	
Study:	General use in Cumbria after the original project, 1994-98
Main reference:	Hatcher (2000)

Research design:	One-group pre-test/post-test study
Age-range:	Y2–10; data not given separately by year groups, therefore included here and not under KS3
Type of children:	Low attainment
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. This showed that the initiative continued to be effective for the generality of poor readers. (However, it seemed no more effective for children with dyslexia or moderate learning difficulties than no intervention – see section 7.8.)
N of experimental group:	427, including 73 'statemented'
Length of intervention in weeks:	12
Tests used:	(Reading) Burt, 1974 revision; (Spelling) Schonell

Gain in months of r.a./s.a. (s.d's not stated), and ratio gains:

	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

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https://languageintervention.com/our-approach/

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The Reading Intervention Programme: *Detailed Evaluations*	
Study:	North Yorkshire, 2005-2010
Main reference:	Unpublished data supplied by Christine Noyes

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 to remarkable progress in reading accuracy.

Research design:	Five one-group pre-test/post-test studies
Age-range:	Y1-Y6
Type of children:	Low attainment
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 that all five cohorts made substantial to remarkable progress.
N of experimental group:	720 in 5 cohorts (see below)
Length of intervention in weeks:	12
Tests used:	Burt (1974 revision)

Average gains in months of r.a. (s.d's not stated) and ratio gains:

	N	**Gain**	**RG**
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

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2.28 THRASS *(Teaching Handwriting Reading and Spelling Skills)*

THRASS *(Teaching Handwriting Reading and Spelling Skills)*				*Impact*			
				modest	useful	substantial	remarkable
	**Reading (Accuracy)**	*Ratio Gain*	**3.4**			✓✓✓	
		Effect size	**n/a**				
	**Reading (Comp)**	*Ratio Gain*	**4.2**				✓✓✓✓
		Effect size	**n/a**				
	**Spelling**	*Ratio Gain*	**2.5**		✓✓		
		Effect size	**n/a**				

Description

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. It is a structured multi-sensory literacy programme which teaches children about letters, speech sounds (phonemes) and spelling choices. It is divided into three areas: handwriting; reading; spelling. It aims to increase 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).

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

Data evaluated here from a study by THRASS itself ('Special Initiative to Enhance Literacy Skills in Bridgend' 1998) and a separate study in Hampshire showed useful to **remarkable** impact on reading, and **useful** impact on spelling in Y3. KS3 data presented in Section 4.14 show **remarkable** impact on spelling, reading accuracy and reading comprehension.

Contact details for THRASS *(Teaching Handwriting Reading and Spelling Skills)*
http://www.thrass.co.uk

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THRASS *(Teaching Handwriting Reading and Spelling Skills)*: *Detailed Evaluations*	
Study:	Bridgend, 1998
Main reference:	Matthews (1998**)**

Research design:	One-group pre-test/post-test study
Age-range:	Y3–Y6
Type of children:	Low attainment
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 remarkable gains in reading (both aspects), and Y3 made useful gains in spelling.
N of experimental group:	160 in 8 schools (for year-groups, see below)
Length of intervention in weeks:	13
Tests used:	(reading) Neale; (spelling) Schonell

Gains (in months of r.a./s.a.) and ratio gains:

	Reading accuracy			**Reading comprehension**		**Spelling**	
	N	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

Contact details for THRASS *(Teaching Handwriting Reading and Spelling Skills)*
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THRASS *(Teaching Handwriting Reading and Spelling Skills)*: *Detailed Evaluations*	
Study:	Hampshire, 2005
Main reference:	Unpublished data supplied by Roger Norgate via Alan Davies

Research design:	One-group pre-test/post-test study
Age-range:	Y2-Y5
Type of children:	Low attainment
Starting and ending levels and progress:	The average pre-test score was in the below average 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 broadly average ranges, having made useful progress.
N of experimental group:	84 in 5 schools
Length of intervention in weeks:	26 on average (6 months used in calculating RG)
Reading test used:	Salford, 3rd edn

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 ratio gain:

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 sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

Contact details for THRASS *(Teaching Handwriting Reading and Spelling Skills)*
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2.29 Toe by Toe®

Toe by Toe®			Impact			
			modest	useful	substantial	remarkable
 Reading (Accuracy)	*Ratio Gain*	**2.5**		✓✓		
	Effect size	**n/a**				

Description

Keda Cowling worked on this scheme for over 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.

Evaluations

Within the West Dunbartonshire Literacy Initiative, which ran for 10 years from about 1995, Toe by Toe was used as the catch-up scheme, yielding 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). The results suggest that, when delivered meticulously, this programme can achieve **useful** gains in reading accuracy at KS2.

Secondary-level data presented in Section 4.15 demonstrate a **useful** gain in reading comprehension.

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Toe by Toe®: *Detailed Evaluations*	
Study:	Scotland, 2002-2003
Main reference:	MacKay (2006, 2007)

Research design:	One-group pre-test/post-test study
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)
Starting and ending levels and progress:	The pre-test score was in the below average 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.
N of experimental group:	104 in 32 schools (91 in P7, 12 in P6, 1 in P5)
Length of intervention in weeks:	24
Tests used:	Neale, 2nd revised UK edn, 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 ratio gain:

	pre	**post**	**gain**	**RG**
reading accuracy	8:0	9:2	14	2.5

Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

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2.30 Units of Sound

(In previous editions labelled Partnership for Literacy)

Units of Sound			Impact			
			modest	useful	substantial	remarkable
	**Reading (Accuracy)**	*Ratio Gain*	**n/a**			
		Effect size	**0.49**	✓		
	**Spelling**	*Ratio Gain*	**n/a**			
		Effect size	**0.37**	✓		

Description

Units of Sound is a structured, cumulative and multi-sensory computer-based programme that was 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. The programme uses revisiting, or 'spiral learning' to introduce and then further develop literacy skills. The scheme is designed for students from age 7 to adults, and is used in all types of mainstream and independent schools and colleges.

From 2005, Dyslexia Action used Units of Sound as a core component of its Partnership for Literacy (P4L) school intervention projects. In P4L, a Dyslexia Action teacher works alongside teachers and TAs, using apprenticeship training as a way of embedding good practice within the school. The early P4Ls were in primary schools, with secondary school projects starting in 2010 – see section 4.16.

Evaluations

Data are evaluated on 147 children who had received the full Dyslexia Action P4L intervention, with pre- and post-tests carried out at a suitable interval (8 months on average). The results showed **modest** benefits for both reading accuracy and spelling. In 2012 the Education Endowment Foundation commissioned an independent RCT evaluation of the scheme from the University of York, as part of its suite of 24 RCTs investigating how to boost literacy at primary/secondary transition. However, the evaluation (Sheard *et al*., 2014) encountered severe problems and did not deliver any clear result; hence the findings presented here are not contradicted.

Secondary-level data presented in Section 4.16 demonstrated **modest** impact on reading accuracy.

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Units of Sound: *Detailed Evaluations*	
Study:	Partnership for Literacy, 2008-2009
Main reference:	Rack (2011)

Research design:	One-group pre-test/post-test study
Age-range:	Y2-Y5
Type of children:	Identified as having dyslexia
Starting and ending levels and progress:	Both starting levels were just over 1 s.d. below the mean, and therefore below the 16th percentile. By the end modest progress had been made in both skills, and the ending levels were about ⅔ of an s.d. below the mean.
N of experimental group:	147 in 10 schools in several LAs
Length of intervention in weeks:	20
Tests used:	WRAT4

Pre- and post-test average standardised scores and s.d's, gains (s.d's not stated) and effect sizes calculated (by GB) 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

Effect sizes:	0.37-0.49 (modest)
Statistical significances:	p<0.001 in both cases

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CHAPTER 3: Literacy at Primary-Secondary Transition

This chapter describes 7 relevant schemes designed to specifically target literacy development during the transition from Primary to Secondary education. Each entry contains an outline description of the scheme itself, followed by a few details of its evaluation and results, and contact details, and then by an analysis of the quantitative evidence for its effectiveness. First, some general characteristics of the 7 schemes are summarised in Table 3.1.

	Scheme	Read	Spell	Write	Y6	Y7	Y8	Length (weeks)	Weekly time requirements	1:1	Group	Pg
3.1	Everyone Can Read	✓	✓		✓	✓		2	5x 60mins		✓	100
3.2	Grammar for Writing				✓		✓	9	4x 40mins		✓	102
3.3	Helen Arkell Y7 Transition Pilot	✓	✓			✓		20-26	Variable	✓		104
3.4	Improving Writing Quality			✓	✓	✓		20	Variable		✓	106
3.5	*Read Write Inc. (Fresh Start)*	✓				✓		22	3x 60mins		✓	108
3.6	Switch-on Reading	✓				✓		10	5x 20mins	✓		110
3.7	The Accelerated Reader	✓						26	5x 60mins	✓		112

Table 3.1: General characteristics of schemes for Primary-Secondary Transition

The descriptors used throughout this book are as follows:		***Impact***			
		modest	useful	substantial	remarkable
	Ratio Gain	1-2 ✓	2-3 ✓✓	3-4 ✓✓✓	4 + ✓✓✓✓
	Effect size	0.2-0.5 ✓	0.5-0.8 ✓✓	0.8-1.0 ✓✓✓	1 + ✓✓✓✓

3.0.1 The problem

Supporting struggling readers as they move from Primary into Secondary is a crucial phase for focused intervention. According to the Department for Education, in 2019 73% of pupils reached the expected standard in reading at the end of Key Stage 2 (KS2) - down by 2 percentage points from 2018 - meaning that 27% of pupils left Primary education below the expected standard in reading (DfE, 2019). In Grammar, Punctuation & Spelling (GPS), 78% of pupils reached the expected standard, meaning 22% did not. The literacy demands of secondary education rapidly increase beyond those required at primary level, and pupils who arrive in secondary schools below the expected standard are highly likely to continue to struggle.

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.

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Duchesne *et al*. (2005) studied 1003 French-Canadian mothers from the time their children were in kindergarten, aged 5, 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 (or used to have) their new pupils take a cognitive ability test (see Galton *et al*., 2003: 55, 71) or attainment tests 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.

State-funded schools have, until 2020/2021, had access to the literacy and numeracy catch-up premium, which gave those schools, including special schools and alternative provision settings, additional funding to support Year 7 pupils who did not achieve the expected standard in reading or maths at the end of Key Stage 2. In June 2020 the UK government announced that the Year 7 catch-up premium was to be discontinued, with additional funding to support pupils with lower attainment at Year 7 entry to be provided through the new national funding formula.

3.0.2 Searching for evidence

How best then should schools support pupils who are struggling to reach expected standards at the point of transition to secondary education? 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)? In May 2012, the Education Endowment Foundation (EEF) was made responsible for administering a £10 million fund to be used to boost attainment at primary/secondary transition. In summer 2012 the EEF invited bids for rigorous research on the area, with an insistence on RCT designs. Also in summer 2012, 2000 Summer Schools 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 £50 million, and this amount came from the Pupil Premium; the evaluation report (Martin *et al*., 2013) contains data only on pupils' attitudes, and none on any boost to their literacy. And in September 2012, a further £55m was announced 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, but the evaluation report on the Pupil Premium (Carpenter *et al*., 2013) makes no mention of any attempt to judge impact on pupils' literacy.

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3.0.3 Outcomes of the EEF programme

The suite of 24 RCTs mounted by the Education Endowment Foundation has produced less firm evidence than might have been hoped. In June 2014 EEF published an interim report titled 'Reading at Transition' (Higgins *et al*., 2014) investigating the 24 candidate schemes. The report concluded that no single approach is enough for supporting all pupils at this stage, and provided evidence-based recommendations for helping pupils who are struggling with literacy at the time of transition. Reports for all 24 completed evaluations are available on the EEF website, and all were considered for inclusion in this report. However, only nine have been mentioned in the end. Two, Improving Writing Quality and The Accelerated Reader, had sufficiently positive findings to warrant full entries (both in this chapter). Others provided new evidence on schemes which were being included anyway. Within the latter group the findings on three schemes are considered strong and reliable enough for these schemes also to feature in this chapter: these are Grammar for Writing, *Read Write Inc.* Fresh Start, and Switch-on Reading.

For the remaining four, either the research had not proved robust enough (The LIT Programme, Units of Sound), or the main finding was statistically non-significant (Catch Up® Literacy, *TextNow*). In these cases the schemes have a mention of the RCTs included in their entries elsewhere in this report, but without considering that the findings contradict the other evidence on them.

The reasons for not mentioning 14 of the RCT evaluations in this report varied: non-significant findings, implementation or sampling problems, small samples, high drip-out, … which all go to show how difficult it is to produce robust and reliable findings, even (or especially) when rigorous research designs are adopted.

The upshot for this chapter is that five schemes have RCT evidence from the EEF programme; the other two had pre-existing evidence from (it must be said) less rigorous research designs and much smaller samples, but still contribute to the evidence overall.

3.1 Everyone Can Read

Everyone Can Read			Impact			
			modest	useful	substantial	remarkable
Reading (Accuracy)	*Ratio Gain*	**13.0**				✓✓✓✓
	Effect size	**n/a**				
Reading (Comp)	*Ratio Gain*	**15.8**				✓✓✓✓
	Effect size	**n/a**				
Spelling	*Ratio Gain*	**9.9**				✓✓✓✓
	Effect size	**n/a**				

Description

Section 1 of this scheme is a three-phase sequential phonics programme. Phase 1 covers short vowel sounds, single consonants, initial and final consonant clusters, and simple prefixes and suffixes. Phase 2 covers long vowels and diphthongs, and further prefixes and suffixes. Phase 3 covers difficult long vowel and diphthong spellings and syllable work. Teacher manuals and pupil workbooks are supported by a range of integrated reinforcement activities. Section 2 is a sight vocabulary programme. Basic sight vocabulary is taught thoroughly and concurrently with Phonics Phases 1 and 2. The aim is to teach pupils to recognise by sight, and to spell, the 400 most common words found in children's literature. Section 3 involves more advanced activities and covers syllables and word meanings.

Evaluations

The largest dataset available (N=29) came from a summer school held at one high school in 1998. The programme was much more intensive (several hours/day), and was taught in larger groups (6), than would usually be the case (several short sessions a week over one term, in groups of 4). Several smaller datasets can be seen on the programme's website.

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Everyone Can Read: *Detailed Evaluations*	
Study:	1998
Main reference:	Unpublished data supplied by Suzanne Attwooll

Research design:	One-group pre-test/post-test study
Age-range:	Y6 about to enter Y7
Type of children:	Reading age more than two years below chronological age
Starting and ending levels and progress:	Given that all these children were aged between 11:0 and 11:11 their starting levels were well behind. All three RGs show remarkable progress, but at the end the children were still well below the norm, and would need ongoing support in their secondary school.
N of experimental group:	29 in one high school in Warwickshire
Length of intervention in weeks:	2-week summer school (½ month used in calculating RGs)
Tests used:	(Reading comprehension) Group Reading Test; (Reading accuracy and spelling) Schonell

Average pre- and post-test r.a's and s.d's in years and months, average gains and s.d's in r.a. in months, average pre- and post-test and gain s.a's and s.d's in years and decimal years, and ratio gains:

	pre		**post**		**gain**		**RG**
	ave.	**(s.d.)**	**ave.**	**(s.d.)**	**ave.**	**(s.d.)**	
reading comp.	9:7	(1:9)	10:3	(2:0)	7.9	(10.1)	15.8
reading accuracy	9:2	(1:1)	9:8	(1:4)	6.5	(5.3)	13.0
spelling	8.7	(1.1)	9.1	(1.1)	0.4	(0.4)	9.9

Effect sizes:	n/a
Statistical significances:	p<0.001 in all cases

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3.2 Grammar for Writing

Grammar For Writing			Impact			
			modest	useful	substantial	remarkable
	Writing	*Ratio Gain*	**n/a**			
		Effect size	**0.24**	✓		

Description

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 [teaching] 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).

Evaluations

The authors' evaluation consisted of a very large cluster RCT, with over 700 Y8 pupils in 31 comprehensive schools divided evenly between the intervention and normal classroom teaching of the set pieces of writing. The experimental group made slightly more progress than the control group, which produced a **modest** effect size which (because of the large sample) was highly statistically significant.

The Education Endowment Foundation commissioned a very large independent RCT evaluation from the University of York and Durham University (2012). That evaluation found some evidence of promise. Despite its short duration (4 weeks), it had a small positive impact when delivered to the whole class, and a larger impact when delivered to small groups. Following these results, the EEF funded a larger evaluation of a scalable version of GfW (2017). This second evaluation focused solely on the whole-class version, and on Year 6 pupils rather than pupils at the transition. It was also delivered over 6 weeks rather than 4. It found no evidence of an impact on pupils' writing outcomes. Given the uncertainty around the impact in the first evaluation and the lack of impact in the second, the EEF will be removing Grammar for Writing from their list of promising projects.

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Grammar For Writing: *Detailed Evaluations*	
Study:	Education Endowment Foundation 2012
Main reference:	Torgerson *et al*. (2014a)

Research design:	Cluster RCT
Age-range:	Y6
Type of children:	Mixed-ability, but those not expected to achieve level 3 in KS2 English test were excluded
Starting and ending levels and progress:	Equivalent pre-test scores were not available, so the starting levels cannot be characterised. However, the very modest increase in writing score, and the modest effect size showing a clear benefit for the small-group experimental group, are in line with the original Y8 RCT conducted by the Exeter team.
N of experimental group:	Full sample: 1004 in one subset of 99 classes in 50 schools (N of LAs not stated) Small-group sample: 210
N of control group:	Full sample: 978 in the other subset of the same classes in the same schools Small-group sample: 607
Equivalence of groups:	No significant differences between groups at randomisation
Length of intervention in weeks:	4
Tests used:	Progress in English 11: Second Edition Long Form, exercises 5 & 6 (extended writing)
Small-group analysis: Statistically significant increase of 0.78 marks (out of 32) by intervention group over control, giving effect size (calculated by research team as difference in post-test means over residual s.d.) of 0.24	
Effect sizes:	0.24 (modest)
Statistical significances:	p<0.05

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3.3 Helen Arkell Y7 Transition Project

Helen Arkell Y7 Transition Project			Impact			
			modest	useful	substantial	remarkable
Reading (Accuracy)	*Ratio Gain*	**n/a**				
	Effect size	**0.52**		✓✓		
Spelling	*Ratio Gain*	**n/a**				
	Effect size	**0.61**		✓✓		

Description

Staff at the Helen Arkell Dyslexia Centre had become increasingly aware that many pupils, especially those with dyslexia/SpLD, find the transition to the secondary curriculum difficult. Drawing on a one-group pilot study in 2009-11, the Centre carried out a small quasi-experiment in 2010-12 comparing their 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 1-1 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, particularly those with a heavy literacy element (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.

Evaluations

Staff at the Centre provided data on 32 pupils in the project. 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.

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Helen Arkell Y7 Transition Project: *Detailed Evaluations*	
Study:	Surrey, 2010-2012
Main reference:	Bark (2012); Bark & Brooks (2016).

Research design:	Matched-groups two-group pre-test/post-test quasi-experiment
Age-range:	Y7
Type of children:	All had average CAT/MIDYIS scores but weak literacy skills on entry to year 7.
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.
N of experimental group:	16 in 3 schools in or near Farnham, Surrey + 16 controls in the same schools
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 used:	Test of Word Reading Efficiency (fluency); Wide-Range Achievement Tests, 4th edition, single word reading test (accuracy) and spelling test

Pre- and post-test average standardised scores, gains and s.d's, effect sizes, and statistical significances:

Test	**group**	**pre-test**			**post-test**		**gain**		**effect**
		ave.	**(s.d.)**		**ave.**	**(s.d.)**	**ave.**	**(s.d.)**	**size**
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	exps	91.4	(7.7)		92.8	(5.4)	1.3	(3.7)	0.52
reading	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)	

Effect sizes:	0.36 - 0.61 (modest to useful)
Statistical significances:	* p<0.05; all other differences ns

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3.4 Improving Writing Quality

Improving Writing Quality			Impact			
			modest	useful	substantial	remarkable
	Writing	*Ratio Gain*	**n/a**			
		Effect size	**0.74**	✓✓		

Description

The project aimed to use memorable experiences and an approach called 'Self-Regulated Strategy Development' (SRSD) to help struggling writers in Years 6 and 7. SRSD provides a clear structure to help pupils plan, monitor and evaluate their writing. It aims to encourage pupils to take ownership of their work and can be used to teach most genres of writing, including narrative. Memorable experiences, such as trips to local landmarks or visits from World War II veterans, were used as a focus for writing lessons.

Evaluations

In 2012 the Education Endowment Foundation commissioned an independent randomised control trial (RCT) evaluation from the University of York and Durham University, as part of its suite of 24 RCTs investigating how to boost literacy at primary/secondary transition (no previous UK studies of the scheme are known). It was one of three programmes with a particular focus on writing.

The RCT involved 23 primary schools in the Calderdale area of West Yorkshire; the Year 6 teachers in the 11 schools randomly allocated to the intervention group received training from the North American developers, but, with support from the Calderdale Excellence Partnership team, also adapted it in some ways for an English context. The other 12 schools were allocated to the control group. Children in the intervention schools were taught following the SRSD approach in the last six weeks of the summer term in Year 6 and in the first term of Year 7 at secondary school. The result showed a **useful** benefit for the intervention group's extended writing. (Reading and spelling were also tested, but produced no significant results).

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Improving Writing Quality: *Detailed Evaluations*	
Study:	Education Endowment Foundation, 2013-2014
Main reference:	Torgerson *et al.* (2014b)

Research design:	Randomised Control Trial (RCT)
Age-range:	Y6-Y7
Type of children:	Predicted to achieve Level 3 or insecure Level 4 in KS2 English
Starting and ending levels and progress:	It is not possible to characterise the starting and ending levels. However, the useful effect size shows a very strong benefit in favour of the intervention group.
N of experimental group:	142
N of control group:	119
Equivalence of groups:	Very closely matched on predicted KS2 English levels
Length of intervention in weeks:	20
Tests used:	Progress in English Second Edition 11 (Long Form)

Average post-test writing scores and s.d's, and effect size as stated by authors:

Group	**N**	**post**		**effect**
		ave.	**(s.d.)**	**size**
exp	142	21.9	(4.39)	0.74
cont	119	19.4	(5.32)	

Effect sizes:	0.74 (useful)
Statistical significances:	p=0.002

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3.5 *Read Write Inc.* *(Fresh Start)*

Read Write Inc. *(Fresh Start)*			***Impact***			
			modest	useful	substantial	remarkable
	**Reading (Comp)**	*Ratio Gain*	**n/a**			
		Effect size	**0.19**	✓		

Description

This is Ruth Miskin's phonics programme for children aged 9 and above (Years 5 and 6 in primary and Years 7 and 8 in secondary). Pupils learn the English alphabetic code: the 150+ graphemes that represent 44 phonemes (speech sounds). They experience success from the very beginning. Lively stories and non-fiction texts are both age-appropriate and closely matched to their increasing knowledge of phonics and 'tricky' words and, as pupils re-read the texts, their fluency increases.

Evaluations

In 2013 the Education Endowment Foundation commissioned an independent RCT evaluation of this scheme from Durham University, as part of its suite of 24 RCTs investigating how to boost literacy at primary/secondary transition. The RCT involved 212 Y7 pupils in 10 schools who received *Read Write Inc. (Fresh Start)* for one hour, three times a week, for 22 weeks. A waiting-list control group of 221 pupils received the intervention after that. There was a **modest** benefit for the intervention group, but this must be interpreted with caution given that (a) the groups' scores were significantly different at pre-test (had the schools interfered in the randomisation?), (b) the effect size reported by the evaluators had been calculated by an erroneous method.

Data for KS3 are presented in Section 4.9 and show between substantial and **remarkable** improvement in reading comprehension.

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Read Write Inc. *(Fresh Start)*: *Detailed Evaluations*	
Study:	Education Endowment Foundation, 2013
Main reference:	Gorard *et al*. (2015a)

Research design:	Randomised Control trial (RCT)
Age-range:	Y7
Type of children:	Pupils with scores at Level 4c and below in KS2 English
Starting and ending levels and progress:	The pre- and post-test scores cannot be characterised because they are not standardised score points, and their nature is not explained in the report. However, the modest effect size shows a benefit in favour of the intervention group. As shown below, the intervention group was still well behind the control group at post-test, despite having made a larger gain. The evaluators dealt with this by using the gain scores as the principal measure – correctly, since an effect size analysis based only on the post-test scores would have suggested the control group made better progress.
N of experimental group:	215 in 10 schools
N of control group:	204 in same schools
Equivalence of groups:	At pre-test, the intervention group's mean score was found to be considerably lower than the control group's
Length of intervention in weeks:	22
Tests used:	New Group Reading Test, Form A at pre-test, Form B at post-test

Average pre- and post-test and gain scores and s.d's, and effect size for comprehension**:**

group	**N**	**pre**		**post**		**gain**		**effect**
		ave.	**(s.d.)**	**ave.**	**(s.d.)**	**ave.**	**(s.d.)**	**size**
exp	215	251.8	(65.4)	279.5	(59.9)	27.5	(47.7)	0.19*
cont	204	274.2	(58.2)	290.6	(53.3)	16.7	(42.1)	

***nb** the evaluators used the **pooled s.d. of the gain scores** as the divisor in their effect size calculation – see the discussion in the Appendix for why this is considered erroneous. The effect size reported above is our re-calculation using the **pooled post-test s.d**.*

Effect size:	0.19 (modest)
Statistical significances:	Were not stated by the evaluators (deliberately – see Gorard *et al*., 2015a: 15) and could not be calculated

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3.6 Switch-on Reading

Switch-on Reading			Impact			
			modest	useful	substantial	remarkable
	Reading (Comp)	*Ratio Gain*	**n/a**			
		Effect size	**0.24**	✓		

Description

This is an intensive 10- or 12-week intervention. It was developed in Nottinghamshire over a number of years as part of the Every Child a Reader initiative, and is inspired by Reading Recovery. It is delivered by staff, most commonly teaching assistants, who have been trained in the approach. Its purpose is to improve pupils' reading accuracy, comprehension and fluency, and so close the reading achievement gap for vulnerable children working below age-expected levels. It has also been shown to benefit spelling. Pupils attend daily 20-minute reading sessions over the course of one term, on a withdrawal basis. In the version evaluated in this RCT, the students were withdrawn from classes for regular 20-minute sessions over the course of one term.

Evaluations

In 2012 the Education Endowment Foundation commissioned an independent RCT evaluation of this scheme from Durham University, as part of their suite of 24 RCTs investigating how to boost literacy at primary/secondary transition. The effect size showed a **modest** benefit to the experimental group's reading comprehension.

A further and larger trial was commissioned, and completed in 2018. The EEF reported in 2018 that *"In a previous EEF trial, Switch-on Reading was found to deliver around 3 months' additional progress in reading outcomes in Year 7. In that trial, the Switch-on training was delivered by its original developers. This new project was designed to test whether Switch-on Reading (and Switch on Reading and Writing) would have an impact using the type of delivery model that would be needed to make it available to a large number of schools, without direct developer involvement".* That second trial did not find evidence that a three-month delivery of Switch-on Reading improves reading outcomes of pupils struggling with literacy at Key Stage 1 compared to schools' usual practices.

See section 2.25 for details of a small scale randomised control group developer-led research project which showed Switch-on Reading to have **substantial** impact on reading accuracy and a **useful** impact on spelling for KS2 pupils.

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Switch-on Reading: *Detailed Evaluations*	
Study:	Education Endowment Foundation, 2013
Main reference:	Gorard *et al*. (2014)

Research design:	Randomised Control Trial (RCT)
Age-range:	Y7
Type of children:	Pupils who had not achieved Level 4 in KS2 English
Starting and ending levels and progress:	The pre- and post-test means are almost 2 s.d's below the norm, hence very far behind. The useful gain shown by the effect size still left the experimental group well short of the norm. All these pupils would need ongoing support in their secondary schools.
N of experimental group:	155 in secondary schools in Nottinghamshire
N of control group:	153 in same schools
Equivalence of groups:	No significant differences at pre-test
Length of intervention in weeks:	10
Tests used:	New Group Reading Test, Form A at pre-test, Form B at post-test

Pre- and post-test average scores (s.d's not stated) and gain scores and s.d's for comprehension in standardised score points, effect size as stated by authors*:

Group	N	Pre-test	Post-test	Gain	s.d.	Effect size
Experimental	155	76.53	80.93	4.40	8.18	0.24
Control	153	76.14	78.73	2.59	6.53	

*The effect size shown was calculated as difference in *gains* over pooled post-test s.d. The authors show that the effect size calculated as difference in *post-test* means over pooled post-test s.d. was identical

Effect sizes:	0.24 (modest)
Statistical significances:	Were not stated and could not be calculated

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3.7 The Accelerated Reader

The Accelerated Reader			Impact			
			modest	useful	substantial	remarkable
	Reading (Comp)	*Ratio Gain*	**n/a**			
		Effect size	**0.26**	✓		

Description

The Accelerated Reader is a computerised program on which pupils assess their own reading comprehension after reading any one of (in 2014) 156,000 titles on the software manufacturer's list. Pupils select their own books and work at their own pace. After reading a book they take a multiple-choice comprehension quiz on it – but only once; taking the test again on the same book is not allowed. The computer scores the test, up to the maximum for each book – the maximum depends on the book's length and difficulty – and provides the teacher with analyses of scores for individual pupils, and indications of areas of weakness. Ideally, there should be about an hour's reading per day, half individual and half listening to the teacher read.

Evaluations

Following several evaluations in the United States, Vollands *et al*. (1999) mounted two small-scale studies in different schools in severely deprived areas of Aberdeen. These featured in the 3rd edition, but were dropped from the 4th because both were too small to meet the more stringent sample size criterion adopted then (Ns = 25 & 22).

In 2013 the Education Endowment Foundation commissioned an independent RCT evaluation from Durham University, as part of its suite of 24 RCTs investigating how to boost literacy at primary/secondary transition. The result showed a **modest** impact for the intervention group's reading comprehension.

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The Accelerated Reader: *Detailed Evaluations*	
Study:	Education Endowment Foundation, 2013
Main reference:	Gorard *et al.* (2015b)

Research design:	Randomised Control Trial (RCT)
Age-range:	Y7
Type of children:	Had not achieved secure level 4 in KS2 English
Starting and ending levels and progress:	The intervention group's post-test score is only just below the norm, while the control group's score is about one-third of an s.d. below. The modest effect size shows a clear benefit in favour of the intervention group.
N of experimental group:	175 in 10 schools
N of control group:	164 in same schools
Equivalence of groups:	Very closely matched on KS2 English points
Length of intervention in weeks:	22
Tests used:	New Group Reading Test, Form A at post-test (only – no equivalent pre-test, hence no gain scores; also, presumably, effect size shown was calculated as difference in post-test scores divided by pooled post-test s.d.)

Average post-test standardised age scores and s.d's for comprehension, and effect size as stated by authors:

Group	**N**	**post**		**effect**
		ave.	**(s.d.)**	**size**
exp	175	98.0	(14.1)	0.26
cont	164	94.5	(13.0)	

Effect sizes:	0.26 (modest)
Statistical significances:	Were not stated by the evaluators (deliberately – see Gorard *et al*., 2015b: 13) and could not be calculated

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CHAPTER 4: Reading / Spelling at Secondary-level

This chapter describes 17 relevant schemes. Each entry contains an outline description of the scheme itself, followed by details of its evaluation and results, references and contact details, and an analysis of the quantitative evidence for its effectiveness. General characteristics of the schemes are summarised in Table 4.1.

	Scheme	Read	Spell	Y7	Y8	Y9	Y10	Y11	Length (weeks)	Weekly time requirements	1:1	Group	Pg
4.1	A.R.R.O.W.™	✓	✓	✓	✓	✓			2	5x 60-mins	✓		115
4.2	Boosting Reading	✓		✓	✓				11	3x 15-mins	✓		117
4.3	Catch Up® Literacy	✓		✓	✓	✓			12-44	2x 15-mins	✓		120
4.4	Dyslexia Gold *(Spelling Tutor)*		✓	✓	✓	✓			12	5x 15-mins	✓		123
4.5	Easyread	✓		✓	✓	✓	✓		26	5x 15-mins	✓		125
4.6	ENABLE *(Sandwell)*	✓		✓	✓	✓			10-14	3x 30-mins	✓	✓	127
4.7	Inference Training	✓		✓	✓	✓			15	2 x 45-mins		✓	129
4.8	Rapid Plus	✓		✓	✓	✓	✓		13	Variable	✓		131
4.9	*Read Write Inc. (Fresh Start)*	✓		✓					6-34	5x 60-mins		✓	133
4.10	Sound Training ©	✓		✓	✓	✓			6	1x 60-mins		✓	136
4.11	That Reading Thing	✓		✓	✓	✓	✓	✓	19	1x 60-mins	✓		139
4.12	The LIT Programme	✓		✓					18	4x 60-mins		✓	141
4.13	Thinking Reading	✓		✓	✓	✓	✓	✓	33	3x 30-mins	✓		143
4.14	THRASS	✓	✓	✓					13	5x 30-mins		✓	145
4.15	Toe by Toe ®	✓			✓	✓			13	5x 20-mins	✓		148
4.16	Units of Sound	✓		✓	✓	✓			20	Variable	✓		150
4.17	Word Wasp	✓	✓	✓	✓	✓			30	5x 30-mins	✓		152

Table 4.1: General characteristics of the Secondary-level schemes for reading and/or spelling

In addition to those listed in this section, there are some data for KS3 pupils mixed in with those for primary pupils under the following schemes listed in Chapter 2:

- AcceleRead AcceleWrite
- Hornet
- Lexia
- Paired Reading
- Sound Reading System
- The Reading Intervention Programme.

The descriptors used throughout this book are as follows:

	Impact			
	modest	useful	substantial	remarkable
Ratio Gain	1-2 ✓	2-3 ✓✓	3-4 ✓✓✓	4 + ✓✓✓✓
Effect size	0.2-0.5 ✓	0.5-0.8 ✓✓	0.8-1.0 ✓✓✓	1 + ✓✓✓✓

4.1 A.R.R.O.W. ™ *(Aural – Read – Respond – Oral – Write)*

A.R.R.O.W.™ *(Aural-Read-Respond-Oral-Write)*			**Impact**			
			modest	useful	substantial	remarkable
 **Reading (Accuracy)**	*Ratio Gain*	**18.0**				✓✓✓✓
	Effect size	**n/a**				
 **Spelling**	*Ratio Gain*	**12.0**				✓✓✓✓
	Effect size	**n/a**				

Description

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 hear their own voices can help some children make good progress. His system uses computer software with headphones to provide personalised many-layered programs tailored to each child's particular needs. 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. Each mini-exercise ends with the requirement that the child writes down the piece of text. Each child should ideally receive the program for one hour a day for ten consecutive school days. One teacher or teaching assistant can supervise as many children as the school has laptops for. The scheme is particularly appropriate for children with reading or spelling weaknesses, but has also been used as a whole-class programme.

Evaluation

In 2010 Colin Lane published a book setting out his theories and providing copious data on its use in various settings. The secondary data presented below show **remarkable** impact for spelling and **remarkable** impact for reading accuracy.

Data from the Primary-level studies are presented in Section 2.1 and show **remarkable** impact on reading accuracy, comprehension and spelling.

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A.R.R.O.W. ™ *(Aural-Read-Respond-Oral-Write): Detailed Evaluations*	
Study:	England and Wales 2010-2015
Main reference:	Lane (2015), unpublished data and details supplied by Colin Lane

Research design:	Accumulated data from numerous one-group pre-test/post-test studies
Age-range:	Y7-9
Type of children:	Low attainment
Starting and ending levels and progress:	Given the wide chronological age-range, the pre-test averages for reading imply 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.
N of experimental group:	188 in 13 schools
Length of intervention in weeks:	2
Tests used:	Schonell Graded Word Reading Test, Schonell Spelling Test

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

	pre	**post**	**gain**	**RG**
reading accuracy	9:8	10:5	9	18.0
spelling	9:6	10:0	6	12.0

Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

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4.2 Boosting Reading

Boosting Reading			Impact			
			modest	useful	substantial	remarkable
	**Reading (Comp)**	*Ratio Gain*	**7.8**			✓✓✓✓
		Effect size	**n/a**			

Description

Boosting Reading is a targeted, time-limited, one-to-one intervention for pupils in Y1–Y9 using a structured lesson format, but not scripted. As a reading intervention, it focuses on the use and application of key skills whilst reading continuous text. Programmes are delivered by trained Teaching Assistants, and it is designed to improve the use of reading strategies and develop understanding, whilst reading continuous text. This enables pupils to become successful, independent readers who read with enjoyment. Each pupil selected for the programme works with a trained adult for 15 minutes, 3 times a week, for 10 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.

Evaluations

Both of the Secondary-level studies presented here demonstrate **remarkable** impact on comprehension and overall reading age.

For the Primary-level analyses, which also demonstrate **remarkable** progress, see Section 2.3.

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Boosting Reading: *Detailed Evaluations*	
Study:	Reading data from multiple schools in 1 LA using same test throughout; 2013-2014
Main reference:	Unpublished data supplied by Clare Reed and Jan Hilditch

Research design:	One-group pre-test/post-test study
Age-range:	Y7-Y9
Type of children:	Low attainment
Starting and ending levels and progress:	In the absence of pre- and post-test data it is not possible to characterise the starting and ending levels. However, the RG was remarkable.
N of experimental group:	55
Length of intervention in weeks:	10 (2.5 months used in calculating RGs)
Tests used:	12 in all, including York Assessment of Reading for Comprehension (YARC), Neale Analysis, NFER, Salford, Suffolk and PM Benchmark

Average gain in Overall Reading Age for comprehension in months of r.a. (s.d's and pre- and post-test data not stated), and ratio gain:

Gain	**RG**
19.6	7.8

Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

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Boosting Reading: *Detailed Evaluations*	
Study:	Derbyshire, 1998-1999
Main reference:	Taylor (2000)

Research design:	One-group pre-test/post-test study
Age-range:	Y7-Y8
Type of children:	Low attainment
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 remarkable progress.
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)
Test used:	Salford (mainly)

Gains in reading comprehension in months of r.a. (s.d's not stated) and ratio gains:

	N	**Gain**	**RG**
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

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4.3 Catch Up® Literacy

Catch Up® Literacy			Impact			
			modest	useful	substantial	remarkable
 Reading (Comp)	*Ratio Gain*	**3.3**			✓✓✓	
	Effect size	**0.58**		✓✓		

Description

Catch Up® Literacy was initially developed in 1998 at Oxford Brookes University, in partnership with the Caxton Trust. 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. It 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.

Evaluations

Secondary level data on 175 Y7-9 pupils in 13 schools in 2 LAs in Wales for the period 2002-06 are reproduced here. 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. Primary-level data presented in Section 2.4 show useful to **remarkable** progress in reading accuracy. A 2008 evaluation with looked-after children demonstrated useful to **remarkable** impact on comprehension.

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Catch Up® Literacy: *Detailed Evaluations*	
Study:	Rhondda Cynon Taf and Vale of Glamorgan, 2005-2007
Main reference:	Unpublished data supplied by Julie Lawes

Research design:	One-group pre-test/post-test study
Age-range:	Y7-Y9
Type of children:	Low attainment
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.
N of experimental group:	175 in 13 schools
Length of intervention in weeks:	34 (average; 8 months used in calculating RG)
Tests used:	Hodder/Murray DRA, NFER Group Reading Test 6-14
Average gain in reading comprehension in months of r.a. (s.d. not stated), and ratio gain: **gain** 19 **RG** 2.4	
Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

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Catch Up® Literacy: *Detailed Evaluations*	
Study:	Nottingham, 2008-2009
Main reference:	Holmes *et al*. (2011, 2012)

Research design:	Randomised Control Trial (RCT)
Age-range:	Y8-Y9
Type of children:	Low attainment
Starting and ending levels and progress:	Both groups had average r.a's of just over 7 years at the start, and were therefore about 6 years behind. The control group made just over standard progress, and at the end were about 2 months less far behind. The experimental group made substantial progress, and at the end were 9 months less far behind. The useful effect size confirms the difference.
N of experimental group:	20 in 6 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)'
Length of intervention in weeks:	7 (4 months used in calculating RGs)
Test used:	Salford

Pre- and post-test average comprehension scores, gains and s.d's (all in months of r.a.), ratio gains, 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 **ratio gains** divided by the pooled post-test s.d.*

Effect sizes:	0.58 (useful)
Statistical significances:	p<0.005 for difference in gains; significances of separate gains not stated

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4.4 Dyslexia Gold *(Spelling Tutor)*

Dyslexia Gold *(Spelling Tutor)*			Impact			
			modest	useful	substantial	remarkable
	**Spelling**	*Ratio Gain*	**3.5**		✓✓✓	
		Effect size	**n/a**			

Description

Spelling Tutor is an online literacy intervention for pupils aged 6 years and above to improve spelling. It uses 'spaced repetition' to ensure spellings are stored in the long-term memory and easy to recall. Pupils use a combination of reading, writing and typing to practise spelling. Delivery is in three parts and lasts for 15 minutes daily. It requires minimal input from teaching staff.

- Part 1 – Recap

Words spelt incorrectly in previous sessions are re-tested, according to the spaced repetition algorithm.

- Part 2 – New Words

The pupil reads a short passage. Then the computer dictates the passage for the pupil to write out. The pupil then marks their work. This section lasts until the pupil has made three mistakes.

- Part 3 – Session Recap

Words spelt incorrectly this session are retested.

Spelling Tutor works by an algorithm that spaces out words pupils have spelt incorrectly and repeats them at calculated intervals to check the spelling knowledge.

Evaluations

The data used for this evaluation were supplied by Liz Sedley. The study was funded by Dyslexia Gold. In this 2018 evaluation, the intervention was intended to be delivered through 15-minute sessions every day over a period of 3 months. Pupils were identified by their SENCO as having a spelling age of at least 12 months behind their chronological age. Analyses show **substantial** improvements in spelling.

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Dyslexia Gold *(Spelling Tutor)*: *Detailed Evaluations*	
Study:	2018
Main reference:	The Impact of Spelling Tutor on Literacy (Research by Dyslexia Gold, July 2018)

Research design:	One group pre-test/post-test study
Age-range:	Y4-Y9
Type of children:	Pupils were identified by their SENCO as having a spelling age of at least 12 months behind the chronological age
Starting and ending levels and progress:	On average pupils spelling improved by 10.5 months over the 3-month period. The RG shows substantial impact
N of experimental group:	65 pupils from 7 schools (At the end of the trial, only data from those pupils who had a spelling age above 5 at the start of the intervention were used. This resulted in 53 pupils)
Length of intervention in weeks:	12
Test used:	Vernon Spelling Test

Pre- and post-test average gains in s.a. (in months), and ratio gain.

	Gain	**RG**
spelling	10.5	3.5

Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

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4.5 Easyread

Easyread			Impact			
			modest	useful	substantial	remarkable
 Reading (Accuracy)	*Ratio Gain*	**3.0**			✓✓✓	
	Effect size	**n/a**				

Description

The Easyread System for helping children learn to read and spell has been developed over the past decade or so 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. 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. 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.

Evaluations

In school year 2014-15 David Messer conducted a randomised control trial in one secondary school in Oxfordshire (the control group received the intervention in school year 2015-16). Preliminary pre- and post-test data were available for 37 children in the experimental group and 36 in the control group. Ratio gains for reading accuracy showed that the control group had made only standard progress, whereas the experimental group had made three times as much, indicating **substantial** progress. There were also indications of improvements in classroom behaviour.

Primary-level data are presented in Section 2.8 and show **remarkable** progress.

Contact details for Easyread
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Easyread: *Detailed Evaluations*	
Study:	2014-15, Oxford
Main reference:	Unpublished data supplied by David Messer of the Open University who was conducting an independent evaluation

Research design:	Randomised Control Trial (RCT)
Age-range:	Y7-Y10
Type of children:	'Low' reading scores
Starting and ending levels and progress:	Both group's starting levels seem to have been well below average. The substantial ratio gain for the experimental group will have enabled them to make up quite a bit of ground.
N of experimental group:	37 in 1 school in Oxford
N of control group:	36 in same school
Equivalence of groups:	Randomised within school; groups did not differ significantly at pre-test
Length of intervention in weeks:	26
Tests used:	Test of Word Reading Efficiency

Ratio gains (no other data available)

	RG
Experimental group	3.0
Control group	1.0

Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

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4.6 ENABLE *(Enhancing Attainment in Basic Literacy)*

ENABLE *(Enhancing Attainment in Basic Literacy)*			Impact			
			modest	useful	substantial	remarkable
 Reading (Comp)	*Ratio Gain*	**3.7**			✓✓✓	
	Effect size	**n/a**				

Description

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). 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. teaching assistants, learning support assistants), whereas ENABLE – One to One can also be delivered by volunteer helpers. Otherwise, the details are the same for all three versions.

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. The pace of instruction is influenced by the pupils' rate of progress, thereby ensuring that all skills are learnt to mastery level.

Evaluations

The KS3 evaluation of ENABLE-Plus (KS3), analysed below, was carried out by the original authors of the scheme. It showed a **substantial** gain in reading comprehension.

Primary-level evaluations are presented in Section 2.9. One showed **substantial** gains in comprehension and spelling for Y2 pupils, the other a **useful** gain in reading accuracy for those in Y3-5.

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ENABLE *(Enhancing Attainment in Basic Literacy)*: *Detailed Evaluations*	
Study:	ENABLE-Plus (KS3), 2006
Main reference:	Unpublished data supplied by Phil Bowen

Research design:	One-group pre-test/post-test study
Age-range:	Y7-Y9
Type of children:	SEN, including 10 pupils with Statements, 6 deemed Statemented (School Action Plus with Local Authority funding), 5 School Action Plus, and 15 at School Action
Starting and ending levels and progress:	Given that these pupils were on average 5 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 4 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.
N of experimental group:	36 in 3 schools
Length of intervention in weeks:	10-14 (3 months used in calculating RG)
Tests used:	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 ratio gain:

pre	**post**	**gain**	**RG**
7:1	8:0	11	3.7

Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

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4.7 Inference Training

Inference Training			Impact			
			modest	useful	substantial	remarkable
 Reading (Accuracy)	*Ratio Gain*	**3.4**			✓✓✓	
	Effect size	**n/a**				

Description

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.

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. See Yuill and Oakhill (1988) for an overview of this research. 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

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

Primary-level data are presented in Section 2.12 These demonstrate **remarkable** impact on accuracy and comprehension skills.

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Inference Training: *Detailed Evaluations*	
Study:	2009-2011, Leicester
Main reference:	Unpublished data supplied by Tony Whatmuff

Research design:	One-group pre-test/post-test study
Age-range:	Y7-Y9
Type of children:	Low attainment
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.
N of experimental group:	120
Length of intervention in weeks:	15 (4.5 months used in calculating RG)
Test used:	Kirklees revision of Vernon
Average gain in months of r.a. for accuracy (s.d. not stated) and ratio gain: **Gain** 11.5 **RG** 3.4	
Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

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4.8 Rapid Plus

Rapid Plus				Impact			
				modest	useful	substantial	remarkable
	**Reading (Accuracy)**	*Ratio Gain*	**4.6**				✓✓✓✓
		Effect size	**n/a**				
	**Reading (Comp)**	*Ratio Gain*	**5.7**				✓✓✓✓
		Effect size	**n/a**				

Description

Rapid Plus is a series of finely levelled books and software for SEN and struggling readers at KS3. It utilises 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 is aimed at students with 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.

Evaluations

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 **remarkable** gains in both accuracy and comprehension.

Contact details for Rapid Plus

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

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Rapid Plus: *Detailed Evaluations*	
Study:	2012, Neath & Port Talbot
Main reference:	Unpublished report and data supplied by Alison Beynon via Robert Nottage

Research design:	One-group pre-test/post-test study
Age-range:	Y7-10 (but only 2 pupils in Y10)
Type of children:	'Struggling with aspects of reading, and performing below chronological expectations'
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 4 years on average and the rest by even more. The gains were remarkable, but much more progress would be needed to bring these pupils up to a functionally literate level.
N of experimental group:	38
Length of intervention in weeks:	13 (3½ months between pre- and post-test used in calculating RG)
Tests used:	Salford Sentence Reading Test, 2012 edition (Form C at pre-test, Form A at post-test)

Gains in months of r.a. (s.d's not stated), and ratio gains:

	gain	**RG**
accuracy	16	4.6
comprehension	20	5.7

Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

Contact details for Rapid Plus
http://www.pearsonschoolsandfecolleges.co.uk/Secondary/EnglishAndMedia/LearningSupport/RapidPlus/RapidPlus.aspx

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4.9 *Read Write Inc. (Fresh Start)*

Read Write Inc. *(Fresh Start)*			***Impact***			
			modest	useful	substantial	remarkable
	**Reading (Comp)**	*Ratio Gain*	**8.0**			✓✓✓✓
		Effect size	**n/a**			

Description

This is Ruth Miskin's programme for children aged 9-13. Fresh Start aims to teach students to read accurately and fluently with good comprehension, to spell correctly and compose their ideas for writing step-by-step. Pupils learn the English alphabetic code: the 150+ graphemes that represent 44 phonemes (speech sounds). They experience success from the very beginning. Lively stories and non-fiction texts are both age-appropriate and closely matched to their increasing knowledge of phonics and 'tricky' words, and as pupils re-read the texts, their fluency increases.

Evaluations

In 2013 the Education Endowment Foundation commissioned an independent RCT evaluation of this scheme from Durham University, as part of its suite of 24 RCTs investigating how to boost literacy at primary/secondary transition. Details of that study, which demonstrated a **modest** benefit for the intervention group, can be found in Section 3.5.

Two smaller studies, at KS3, come from one secondary school in Leicester (2003-2005) and another in Cornwall (2006-2007). Data were gathered on 63 and 27 pupils respectively. The results showed between useful and **remarkable** improvement in reading comprehension.

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Read Write Inc. *(Fresh Start)*: *Detailed Evaluations*	
Study:	2003-2005, Leicester
Main reference:	Lanes *et al*. (2005)

Research design:	One-group pre-test/post-test study
Age-range:	Y7
Type of children:	Pupils with r.a's below 9:0 on entry to the school
Starting and ending levels and progress:	The pre-test score was in the below average 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.
N of experimental group:	63 in 2 consecutive cohorts in one secondary school in Leicester
Length of intervention in weeks:	34 (9 months used in calculating RG)
Test used:	New Macmillan Individual Reading Analysis

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 ratio gain:

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 sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

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Read Write Inc. *(Fresh Start)*: *Detailed Evaluations*	
Study:	2006-2007, Cornwall
Main reference:	Unpublished data supplied by Rosemary Austin

Research design:	One-group pre-test/post-test study
Age-range:	Y7
Type of children:	Low attainment on entry to school
Starting and ending levels and progress:	Pre-test score was in the below average range/below age-related expectation. Having made remarkable progress, at post-test these pupils were still on average about 2 years behind, and would need further support.
N of experimental group:	27 in one secondary school
Length of intervention in weeks:	6 (1.5 months used in calculating RG)
Test 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

Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

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4.10 Sound Training ©

Sound Training ©			Impact			
			modest	useful	substantial	remarkable
 Reading (Accuracy)	*Ratio Gain*	**18.4**				✓✓✓✓
	Effect size	**0.83**			✓✓✓	

Description

This scheme was developed by Katy Parkinson in Middlesbrough to help pupils in KS3 with reading difficulties. It is now used in KS2 and KS4 as well. KS2 data are presented in Section 2.24. At Secondary-level, pupils, in groups of four, attend six 1-hour sessions over a period of six weeks. Delivery is very intensive and repetitive using multi-sensory teaching methods. Pupils are explicitly taught syllabification. All tasks must be completed accurately, fluently and automatically in order to progress.

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 Key Stage 3 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 which have been colour-coded, e.g. in the word 'condensation' the second and fourth syllables are printed in red.
- 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.

Evaluations

These were carried out by the author, covering two sets of data from schools using the scheme. The ratio gains for accuracy in these studies were **remarkable**; the effect sizes calculated were useful to **substantial**.

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Sound Training ©: *Detailed Evaluations*	
Study:	2004-05, The Pilot Study
Main reference:	Unpublished data supplied by Katy Parkinson

Research design:	Matched-groups two-group quasi-experiment
Age-range:	Y9
Type of children:	Mixed-ability mainstream pupils, none statemented but with reading ages up to 4 years below chronological age
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 probably struggling with the secondary curriculum. The experimental group made modest progress, but the useful effect size, remarkable RG and highly significant difference between the gains show that they had made much better progress than the comparison group, who had made some progress but were still well behind.
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:	6 (1.5 months used in calculating RGs)
Test used:	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 as difference in gains divided by pooled post-test s.d.:

	N	**pre**		**post**		**gain**		**RG**	**effect size**
		ave.	**(s.d.)**	**ave.**	**(s.d.)**	**ave.**	**(s.d.)**		
exps	70	10.8	(1.0)	11.9	(1.2)	13	(12)	8.7	0.68
comps	21	11.1	(1.2)	11.4	(1.4)	3	(8)	2.0	

Effect size:	0.68 (useful)
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.

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Sound Training ©: *Detailed Evaluations*	
Study:	2012-2015
Main reference:	Unpublished data supplied by Katy Parkinson

Research design:	One-group pre-test/post-test study
Age-range:	Y7-Y9
Type of children:	Mixed-ability mainstream pupils, none statemented but some with reading ages well below chronological age
Starting and ending levels and progress:	The average c.a. of pupils entering Y7-9 is 12.5, so this was a middling sample. They made substantial to remarkable progress by both impact measures, such that their average ending level was above their average chronological age.
N of experimental group:	2,897 in over 100 schools across England and Wales
Length of intervention in weeks:	6 (1.5 months used in calculating RG)
Test used:	WRAT 4

Pre- and post-test average standardised scores (ss) and s.d's in ss points, average r.a's and s.d's in years and decimal years, gains in reading accuracy and s.d's in same units, ratio gain, and effect size calculated using the s.d. of the test:

	pre		**post**		**gain**		**RG**	**effect**
	ave.	**(s.d.)**	**ave.**	**(s.d.)**	**ave.**	**(s.d.)**		**size**
ssp	97.1	(12.1)	109.5	(18.2)	12.4	(12.4)		0.83
r.a.	12.3	(2.5)	14.6	(3.0)	27.6	(23.1)	18.4	

Effect sizes:	0.83 (substantial)
Statistical significances:	Were not stated and could not be calculated.

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4.11 That Reading Thing

That Reading Thing			Impact			
			modest	useful	substantial	remarkable
 Reading (Accuracy)	*Ratio Gain*	**3.5**			✓✓✓	
	Effect size	**n/a**				

Description

That Reading Thing (TRT) is the brainchild of Tricia Millar, an experienced teacher who devised a linguistically-based, phonetically accurate and meticulously organised linguistic phonics programme to help young people with poor literacy improve their reading, and therefore their educational attainment and life chances. TRT 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 how the language works from sound to print, and is therefore deliberately designed to make no assumptions about each new student's level of reading and spelling. The materials are organised into 30+ levels. Everyone proceeds through all the levels, but a test consisting of the first few levels indicates how quickly or slowly that happens. Early levels rehearse the basics of word recognition and spelling, and those who struggle go through all these levels in detail; those who can move ahead fast do so.

Students build, spell and read age-appropriate multisyllabic words from the first session. The materials also recognise the potential for boredom on the part of the students and every teaching session has a rapid succession of different activities.

TRT is intended to be delivered one-to-one, either by teachers employed by a LA which has bought the scheme in, or by volunteers. All tutors receive training in person, or online. The tutors' manual and the website provide them with all materials and activities needed. They also provide word-by-word scripts for tutors to follow.

Evaluations

Originally designed for older teenagers, including those disaffected and young offenders, it is now more often used in KS3. In 2012-13 Tricia Millar, with Welsh-speaking colleagues, developed a Welsh-language version called Llywio Darllen. KS3 data analysed here were collected by Tricia Miller and colleagues in 2009-11. The ratio gains indicate **substantial** progress.

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That Reading Thing: *Detailed Evaluations*	
Study:	2009-2011
Main reference:	Brooks (2012)

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

Research design:	One-group pre-test/post-test study
Age-range:	11-18 (average 13:11 at pre-test), but mainly KS3
Type of children:	Low attainment
Starting and ending levels and progress:	At pre-test the students were on average 5½ 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 4½ 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.
N of experimental group:	123 in various schools in Birmingham, Ellesmere Port, Huddersfield and the London Boroughs of Redbridge, Tower Hamlets and Waltham Forest
Length of intervention in weeks:	19 (average)
Test used:	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 ratio gain:

	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 sizes:	n/a
Statistical significances:	p<0.001

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4.12 The LIT Programme

The LIT Programme			Impact			
			modest	useful	substantial	remarkable
 Reading (Accuracy)	*Ratio Gain*	**2.2**		✓✓		
	Effect size	**0.35**	✓			
 Reading (Comp)	*Ratio Gain*	**2.6**		✓✓		
	Effect size	**0.46**	✓			

Description

This scheme for boosting literacy at KS3 was developed from 2007 onwards by Elina Lam and colleagues in the London Borough of Hackney's Learning Trust. The programme's unique characteristic is that it is entirely literature-based: all the learning and assessment materials are authentic texts appropriate to the age-range, used with publishers' and authors' permission. Initially a reading programme, LIT is now a fully comprehensive English programme that includes reading, writing, spoken English and communication, grammar and vocabulary. Included in the price of the programme is an initial training session delivered at a school by a LIT Programme trainer. Detailed lesson plans, resources and integrated baseline and follow-up assessment are intended to make teaching and learning explicit, and are accompanied by matching pupil resources in the form of pupil booklets. Ongoing email and telephone support is also available from LIT Programme coordinators. The programme is designed to be taught alongside, or in place of, English lessons, for 3–4 hours per week, in small groups of no more than six pupils per adult, and to last the whole of Y7. A 2016 revision is intended to equip pupils with metacognitive and self-regulation strategies for reading, writing, spoken English and communication, in addition to providing a new assessment framework for Y7 English and literacy.

Evaluations

Elina Lam conducted an RCT evaluation of a pilot version in 2009-10. It showed **useful** gains in both reading accuracy and comprehension.

Then in 2012 the Education Endowment Foundation commissioned an independent RCT evaluation from the Institute for Fiscal Studies and NatCen Social Research, as part of its suite of 24 RCTs investigating how to boost literacy at primary/secondary transition. The RCT involved 4,413 pupils in 41 schools across England. However, differential drop-out from the intervention and control groups meant that the analysis of results was too compromised for any firm conclusions to be drawn. Therefore the results are not reported here, and do not contradict Elina Lam's own finding.

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The LIT Programme: *Detailed Evaluations*	
Study:	2009-2010
Main reference:	Lam (2010)

Research design:	One-group pre-test/post-test study
Age-range:	Y7
Type of children:	Low attainment (KS2 results for English below 4c)
Starting and ending levels and progress:	The average age of these pupils at pre-test was 11y 4m, so their r.a's of 8y 4m and 8y 10m were well below; similarly, their initial standard scores were a full s.d. or more below the norm. The effect sizes and RGs show useful progress, but they would still need ongoing support to cope with the secondary curriculum.
N of experimental group:	42 in 5 schools in one LA
Length of intervention in weeks:	18 (4.5 months used in calculating RGs)
Tests used:	York Assessment of Reading for Comprehension (YARC)

Pre- and post-test average standard scores (SS) in SS points, r.a's in months, s.d's in same units, average gains in same units (s.d.'s not stated), effect sizes calculated as gains divided by the s.d. of the test, ratio gains and statistical significances (p):

YARC Standard scores	**N**	**pre**	**post**	**gain**	**effect size**	**p**
Accuracy	42	81.33 (10.53)	86.57 (11.46)	5.24	0.35	<0.001
Comprehension	42	85.83 (7.44)	92.76 (9.52)	6.93	0.46	<0.001
YARC Reading age					RG	
Accuracy	42	100.05 (15.36)	109.76 (17.29)	9.71	2.2	<0.001
Comprehension	42	105.90 (10.66)	117.52 (14.62)	11.62	2.6	<0.001

Effect sizes:	0.35-0.46 (modest)
Statistical significances:	p <0.001

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4.13 Thinking Reading

Thinking Reading			Impact			
			modest	useful	substantial	remarkable
 Reading (Accuracy)	*Ratio Gain*	**5.6**				✓✓✓✓
	Effect size	**n/a**				

Description

Thinking Reading is a whole-school literacy strategy for secondary schools that uses close and thorough assessment to ensure precise identification of student need. After screening using standardised assessment, selected students complete three 30-minute individualised lessons a week. Lessons are in two parts: systematic decoding practice, and systematic language teaching related to graded prose. Thinking Reading is phonics-based, and uses Direct Instruction and Precision Teaching methods to ensure rapid learning to fluency, leading to maintenance of gains. Each student's programme includes reading, spelling, comprehension and extended writing. Students continue on the programme until their reading age matches their chronological age.

Evaluations

This is one of very few schemes with data from students in KS4 (ages 14-16) as well as KS3 (ages 11-14). In 2007–10. Dianne Murphy, who devised the scheme, pre- and post-tested 44 students in one High School in the London Borough of Hammersmith and Fulham. The average time students followed the programme was unusually long – 14 months. The results showed a **remarkable** gain in reading accuracy.

Further data were supplied in 2015 from 43 students at one Academy in the London Borough of Haringey. The average time students followed the programme was again unusually long – 11 months, and the results again showed a **remarkable** gain in reading accuracy.

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Thinking Reading: *Detailed Evaluations*	
Study:	2007-2013, London
Main reference:	Two sets of unpublished data supplied by Dianne Murphy

Research design:	Two one-group pre-test/post-test studies
Age-range:	Y7-11, including 27 Y10-11 students across the two studies
Type of children:	Low attainment
Starting and ending levels and progress:	In the absence of pre- and post-test average scores the 2007-10 starting and ending levels cannot be characterised. However, the starting level for 2010-13 was about 4 years of r.a. behind on average, while the ending level was at the average chronological age, consistent with the average gain of 5 years of r.a. in an average of just under one calendar year. Both RGs show remarkable progress, sustained over unusually long periods.
N of experimental group:	(2007-10) 44 in 1 High School in Hammersmith and Fulham (2010-13) 43 in 1 Academy in Haringey
Length of intervention in weeks:	(2007-10) 34 (but average interval between pre- and post- test, 14.6 months, used in calculating RG) (2010-13) 32 (but average interval between pre- and post- test, 11 months, used in calculating RG)
Tests used:	(2007-10) Probe Reading Assessment (2010-13) Triune Probe 2

Pre- and post-test average r.a's and s.d's in years and decimal years (not stated for 2007-10), gains and s.d's in months of accuracy r.a., and ratio gains:

	pre		**post**		**gain**	**(s.d.)**	**RG**
	r.a.	**(s.d.)**	**r.a.**	**(s.d.)**			
2007-10					82	(16)	5.6
2010-13	9.4	(1.8)	14.4	(0.9)	59	(21)	5.3

Effect sizes:	n/a
Statistical significances:	(2007-10) Were not stated and could not be calculated (2010-13) $p<0.001$

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4.14 THRASS *(Teaching Handwriting, Reading and Spelling Skills)*

THRASS *(Teaching Handwriting Reading and Spelling Skills)*				***Impact***			
				modest	useful	substantial	remarkable
	**Reading (Accuracy)**	*Ratio Gain*	**4.0**				✓✓✓✓
		Effect size	**n/a**				
	**Reading (Comp)**	*Ratio Gain*	**5.7**				✓✓✓✓
		Effect size	**n/a**				
	**Spelling**	*Ratio Gain*	**4.0**				✓✓✓✓
		Effect size	**n/a**				

Description

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. It is a structured multi-sensory literacy programme which teaches children about letters, speech sounds (phonemes) and spelling choices. It is divided into three areas: handwriting; reading; spelling. It aims to increase 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).

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 there is always practice of material already covered. Children work together, while the teacher provides positive encouragement and reinforcement.

Evaluations

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 **remarkable** progress in spelling. Primary-level data in Section 2.28 showed useful to **remarkable** impact on reading, and **useful** impact on spelling in Y3.

Contact details for THRASS *(Teaching Handwriting Reading and Spelling Skills)*
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THRASS (Teaching Handwriting Reading and Spelling Skills): *Detailed Evaluations*	
Study:	Bridgend, 1988
Main reference:	Matthews (1998**)**

Research design:	One-group pre-test/post-test study
Age-range:	Y7
Type of children:	Low attainment
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.
N of experimental group:	57 in 4 schools in Bridgend
Length of intervention in weeks:	13
Tests used:	(Reading) Neale;

Gains (in months of r.a./s.a.) and ratio gains:

	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

Contact details for THRASS (Teaching Handwriting Reading and Spelling Skills)
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THRASS (Teaching Handwriting Reading and Spelling Skills): *Detailed Evaluations*	
Study:	Sheffield, 2008
Main reference:	Unpublished data supplied by Yewlands Secondary School (now Yewlands Academy) via Alan Davies

Research design:	One-group pre-test/post-test study
Age-range:	Y7
Type of children:	Low attainment
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 remarkable progress in spelling.
N of experimental group:	200 in 1 school
Length of intervention in weeks:	8 (2 months used in calculating RG)
Test used:	Schonell
Gain in months of s.a. (s.d. not stated) and ratio gain: **gain** **RG** spelling 8 4.0	
Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

Contact details for THRASS (Teaching Handwriting Reading and Spelling Skills)
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4.15 Toe by Toe®

Toe by Toe®			Impact: modest	useful	substantial	remarkable
 Reading (Comp)	*Ratio Gain*	**2.0**		✓✓		
	Effect size	**n/a**				

Description

Keda Cowling worked on this scheme for over 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.

Evaluations

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 3 months, while the control group received normal learning support. The experimental group at KS3 made a **useful** gain in comprehension, while the control group made about one third of normal progress.

Primary-level data presented in Section 2.29 suggest that, when delivered meticulously, this programme can achieve **useful** gains in reading accuracy at KS2.

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Toe by Toe®: *Detailed Evaluations*	
Study:	Scotland, c.2002
Main references:	Mackay (2006, 2007)

Research design:	Matched-pairs two-group quasi-experiment
Age-range:	Scottish Secondary 1-2 (= England and Wales Y8-9)
Type of children:	Referred for learning support because of low reading levels
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.
N of experimental group:	12 in 1 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
Test used:	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 ratio gains:

	pre	**post**	**gain**	**RG**
exps	8:2	10:2	24	2.0
comps	8:5	8:9	4	0.3

Effect sizes:	n/a
Statistical significances:	p<0.001

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4.16 Units of Sound

Units of Sound			Impact			
			modest	useful	substantial	remarkable
 Reading (Accuracy)	*Ratio Gain*	**n/a**				
	Effect size	**0.27**	✓			

Description

Units of Sound 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. The programme uses revisiting, or 'spiral learning', to introduce and then further develop literacy skills. The scheme is designed for students from age 7 to adults, and is used in all types of mainstream and independent schools and colleges. From 2005, Dyslexia Action used Units of Sound as a core component of its Partnership for Literacy (P4L) school intervention projects. In P4L, a Dyslexia Action teacher works alongside teachers and TAs, using apprenticeship training as a way of embedding good practice within the school. The secondary school version has two models reflecting the different needs of students. In the first, students with the more severe literacy needs are given weekly lessons in school. In the second model, underperforming students with less severe needs are shown how to use Units of Sound in school, but then work mostly independently at home or after school.

Evaluations

An external RCT evaluation of the home-supported Secondary-level version was carried out by the Centre for Evaluation and Monitoring (CEM) at Durham University in 10 schools in England. This showed a **modest** impact on reading accuracy.

Primary-level data presented in Section 2.30 showed **modest** benefits for both reading accuracy and spelling.

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Units of Sound: *Detailed Evaluations*	
Study:	2010, England
Main reference:	King and Merrell (2012)

Research design:	Randomised Controlled Trial (RCT)
Age-range:	Y7-Y9
Type of children:	Low attainment
Starting and ending levels and progress:	Both starting levels were just under 1 s.d. below the mean, and therefore at about the 16th percentile. By the end the experimental group had made good progress, its ending level being about ⅔ of an s.d. below the mean, while the control group had made very little progress and were still almost a full s.d. below the mean.
N of experimental group:	118 in 10 schools in several LAs
N of control group:	89 in same schools
Equivalence of groups:	Pre-test difference non-significant
Length of intervention in weeks:	26 (average; range 5-7 months)
Tests used:	WRAT4

Pre- and post-test average standardised scores and s.d's for reading accuracy, gains (s.d's not stated) and effect size:

group	**pre**		**post**		**gain**	**effect**
	ave.	**(s.d.)**	**ave.**	**(s.d.)**	**ave.**	**size**
experimental	86.0	(3.3)	90.4	(7.9)	4.4	0.27
control	86.0	(3.3)	88.4	(7.1)	2.4	

Effect sizes:	0.27 (modest)
Statistical significances:	p=0.008

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4.17 Word Wasp

Word Wasp			Impact			
			modest	useful	substantial	remarkable
	**Reading (Accuracy)**	*Ratio Gain*	**3.8**		✓✓✓	
		Effect size	**n/a**			
	**Spelling**	*Ratio Gain*	**2.6**	✓✓		
		Effect size	**n/a**			

Description

Word Wasp, and its KS1 & 2 companion Hornet, are complementary, stand-alone, phonics-based, colour-coded reading and spelling programmes. Each is based on a single book, and each text has its own dated and diagnostic marking system.
The authors assert that "The Hornet and the Word Wasp teach literacy based on the code and cipher of the English language….Teaching decoding and encoding together is the most dynamic and successful way to foster literacy".

Training is not needed, as each exercise is accompanied by easy to follow, colour coded instructions. The text is a one-to-one manual designed for school and/or home use or a mixture of the two. Word Wasp is systematically punctuated with word lists, passages and poems for both reading and spelling. **Wasp** stands for: **W**ord **A**rticulation, **S**pelling and **P**ronunciation. From the initial exercises, words and passages contain only decodable or encodable words from elements that have been introduced and coached. Low frequency words are taught early in order to engage the student fully with the phonic structure. Words which are not phonically regular are tied to rules that support a phoneme/grapheme analysis and are grouped in appropriate word frames which are repeated at regular intervals. It is a dynamic way of teaching literacy; involving listening, hearing, speaking, watching and thinking. The marking system reveals any weaknesses, and the text provides the strategies to deal with them.

Evaluations

Secondary-level data from two studies are presented here. A 2015 study of 40 KS3 pupils demonstrated a substantial gain in reading accuracy, and a useful gain in spelling. A 2019 study also demonstrated **substantial** impact for reading accuracy and **useful** gains for spelling.

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Word Wasp: *Detailed Evaluations*	
Study:	Leeds and Hertfordshire, 2014-15
Main reference:	Unpublished data supplied by Nicola Cook

Research design:	One-group pre-test/post-test study
Age-range:	KS3 (ages 11-14), with a few younger and older outliers
Type of children:	Low reading scores
Starting and ending levels and progress:	Given that most of these students were aged 11-14, the starting levels were substantially below average. The useful to substantial ratio gains will have enabled many of them to get much closer to age-appropriate levels, but most would still need ongoing support.
N of experimental group:	40 (reading) / 43 (spelling) in 3 schools
Length of intervention in weeks:	30.4 (average)
Tests used:	Salford, Blackwell and Burt

Pre- and post-test average r.a's/s.a's and s.d's for reading accuracy and spelling in years and months, average gains and s.d's in months of r.a./s.a., and ratio gains:

	pre		**post**		**gain**		**RG**
	ave	**(s.d.)**	**ave**	**(s.d.)**	**ave**	**(s.d.)**	
reading accuracy	9:4	(1:3)	11:3	(1:5)	23.8	(11.0)	3.8
spelling	9:0	(1:9)	10:7	(1:10)	18.3	(10.3)	2.6

Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

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Word Wasp: *Detailed Evaluations*	
Study:	Leeds & Hertfordshire, 2019
Main reference:	Unpublished data supplied by Nicola Cook

Research design:	One-group pre-test/post-test study
Age-range:	KS3 (ages 11-14), with a few younger and older outliers
Type of children:	Mixed ability
Starting and ending levels and progress:	Overall, there was useful improvement in spelling, and substantial progress was demonstrated in reading accuracy.
N of experimental group:	41 (Reading) 31 (Spelling)
Length of intervention in weeks:	27.5 (average) 7 months used in calculating RG
Tests used:	A range, including: Burt, Salford, Blackwell Spelling, YARC, and Schonell

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

	pre ave	**post ave**	**gain ave**	**RG**
reading accuracy	9:4	11:4	24	3.4
spelling	8:8	10:2	18	2.6

Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

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CHAPTER 5: Writing at Primary- and Secondary-level

This chapter describes 4 **relevant schemes**. Each entry contains an outline description of the scheme itself, followed by a few details of its evaluation, results and effectiveness. References and contact details are provided for each scheme. First, some general characteristics of the 4 schemes are summarised in Table 5.1.

	Scheme	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Length (weeks)	Weekly time requirement	1:1	Group	Pg
5.1	Grammar For Writing						✓		✓	9	4x 40mins		✓	156
5.2	Paired Writing				✓		✓			6-8	Variable	✓		158
5.3	Reading Recovery	✓	✓							12-20	5x 30-mins	✓		161
5.4	Write Away Together		✓	✓	✓	✓	✓			12	2x 20-mins	✓		163

Table 5.1: General characteristics of the schemes for writing

In Chapter 3 you will find five other schemes which also contain data for writing. Those schemes are:

- Everyone Can Read
- Helen Arkell Y7 Transition Project
- Improving Writing Quality
- *Read Write Inc. (Fresh Start)*
- Switch-on Reading.

The data for those five schemes related specifically to pupils at the transition between Primary and Secondary education. The schemes and data presented in this chapter relate to programmes for developing writing more broadly across Key Stages 1, 2 and 3.

The descriptors used throughout this book are as follows:		***Impact***			
		modest	useful	substantial	remarkable
	Ratio Gain	1-2 ✓	2-3 ✓✓	3-4 ✓✓✓	4 + ✓✓✓✓
	Effect size	0.2-0.5 ✓	0.5-0.8 ✓✓	0.8-1.0 ✓✓✓	1 + ✓✓✓✓

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5.1 Grammar For Writing

Grammar For Writing			Impact			
			modest	useful	substantial	remarkable
	Writing	*Ratio Gain*	**n/a**			
		Effect size	**0.21**	✓		

Description

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).

Evaluations

The authors' evaluation consisted of a very large cluster RCT, with over 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 which (because of the large sample) was highly statistically significant.

For details of a very large independent RCT evaluation commissioned by The Education Endowment Foundation for Y6 pupils as part of their Primary-Secondary transition project see Section 3.2. That demonstrated **modest** impact. (Reading and spelling were also assessed but produced no significant results).

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Grammar For Writing: *Detailed Evaluations*	
Study:	Exeter 2009-2010
Main reference:	Myhill *et al*. (2011, 2012, 2013); Jones *et al.* (2013)

Research design:	Cluster RCT
Age-range:	Y8
Type of children:	Mixed-ability
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.
N of experimental group:	378 in 16 schools in 7 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:	9 (three weeks in each term of a full school year)
Tests used:	**'**Both the pre- and post-test writing sample[s] 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 ave.	(s.d.)	post ave.	(s.d.)	gain ave.	effect size
experimental	14.2	(5.7)	17.6	(5.7)	3.4	0.21
control	15.2	(6.2)	17.4	(6.0)	2.2	

Effect sizes:	0.21 (modest)
Statistical significances:	p<0.001

Contact details for Grammar For Writing
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5.2 Paired Writing

Paired Writing			Impact			
			modest	useful	substantial	remarkable
 Writing	*Ratio Gain*	**n/a**				
	Effect size	**0.63**	✓	✓✓		

Description

Paired Writing is another in the suite of innovations devised and researched by Keith Topping and colleagues (see Cued Spelling and Paired Reading, sections 2.5 and 2.14). 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'). In 2015 further resources became available at http://www.dundee.ac.uk/esw/research/resources/thinkingreadingwriting/#d.en.158378

Evaluations

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

The data analysed here, from Sutherland and Topping (1999), and from Yarrow and Topping (2001) demonstrated modest gains for the Primary4/Year4 group and **useful** gains for the Primary6/Year6 pupils.

Contact details for Paired Writing
Prof Keith Topping
www.dundee.ac.uk/esw/people/kjtopping.htm
k.j.topping@dundee.ac.uk

Paired Writing: *Detailed Evaluations*	
Study:	Scotland Primary 4 Study, 1999
Main reference:	Sutherland and Topping (1999); also summarised in Topping (2001), and Topping *et al.* (2000); approach also described in Topping (1995)

Sutherland and Topping (1999) studied two groups of 16 children 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. 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).

Research design:	Matched groups RCT
Age-range:	Primary 4 (equivalent to Y4 in England)
Type of children:	Mixed-ability
Starting and ending levels and progress:	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).
N of experimental group:	16 in each of two classes in 1 school. One group had helpers ('tutors') of same ability (and swapped roles at intervals), the other had helpers of different ability (and did not swop 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:	8
Assessment used:	Scottish 5-14 National Curriculum Guidelines (SQA, 1997) which had 5 levels, A (low)-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:

		pre-test	post-test	gain	effect size
cross-ability	Experimental	1.75	2.13	0.38	0.33
	Control	1.31	1.44	0.13	
same-ability	Experimental	1.63	1.69	0.06	0.29
	Control	1.75	1.56	-0.19	

Effect sizes:	0.29-0.33 (modest)
Statistical significances:	difference between gains of 2 experimental groups significant, p = 0.038

Contact details for Paired Writing
Prof Keith Topping
www.dundee.ac.uk/esw/people/kjtopping.htm
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Paired Writing: *Detailed Evaluations*	
Study:	Scotland Primary 6 Study, 2001
Main reference:	Yarrow and Topping (2001); also summarised in Topping (2001), and Topping *et al.* (2000); approach also described in Topping (1995)

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 control group. The experimental group contained both writers and helpers; their data are analysed together (as the 'Interaction' group) here because the groups would otherwise be too small. The Interaction group made significantly more gain than the No Interaction control group.

Research design:	Matched groups RCT
Age-range:	Scottish Primary 6 (= England and Wales Y6)
Type of children:	'A problematic mixed-ability class'
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.
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:	6 (8 weeks between pre-and post-test)
Assessment used:	Scottish 5-14 National Curriculum Guidelines (SQA, 1997) which had 5 levels, A (low)-E (high), using 35 sub-criteria to create a 35-point scale for statistical purposes in this study

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 ave.**	**(s.d.)**	**gain ave.**	**(s.d.)**	**effect size**
Experimentals	11.10	16.15	(4.06)	5.08	(2.33)	0.63
Controls	11.16	13.54	(4.89)	2.38	(3.52)	

Effect sizes:	0.63 (useful)
Statistical significances:	p = 0.016 for difference between gains

Contact details for Paired Writing
Prof Keith Topping
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k.j.topping@dundee.ac.uk

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5.3 Reading Recovery *(Every Child A Reader)*

Reading Recovery *(Every Child A Reader)*			Impact			
			modest	useful	substantial	remarkable
	**Writing**	*Ratio Gain*	**n/a**			
		Effect size	**1.63**			✓✓✓✓

Description

Reading Recovery is aimed at children who during 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 children receive daily 30-minute one-to-one lessons for up to 20 weeks from a specially trained teacher. Throughout the lesson the teacher's interventions, based on daily diagnoses, are carefully geared to identify and praise successes, promoting confident and independent behaviour, and a range of strategies are brought to bear whenever problems arise. Children leave the programme when reading improves to the level of the average reading group in their class (in RR parlance, 'are discontinued' or, more recently, 'have achieved accelerated learning'), enabling them to work in class without additional support. Children who are not successfully discontinued are referred for more detailed assessment and specialist help.

In 2005 a consortium of charitable trusts and businesses provided £4.5 million over three years, matched by the D*f*ES, for a revived RR initiative in England, called 'Every Child a Reader' (ECaR). 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 2005 funding included an evaluation of ECaR based in 5 London boroughs plus five other boroughs in London which provided a comparison group. This demonstrated **remarkable** impact on reading accuracy, as did further evaluations across Britain and Ireland (2004-2005), and Bristol (2011). The 2005 study also demonstrated **remarkable** impact on writing. Detailed evaluation of the original Reading Recovery programme can be found in the 5th edition of this book (Section 3.18) or Sylva and Hurry (1995a, b, 1996), Hurry and Sylva (1998, 2007).

Contact details for Reading Recovery
International Literacy Centre at the UCL Institute of Education, University of London:
http://www.ioe.ac.uk/research/4399.html

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Reading Recovery (Every Child A Reader): *Detailed Evaluations*	
Study:	Every Child A Reader in London, 2005-2006
Main reference:	Burroughs-Lange (2006, 2008), Burroughs-Lange and Douëtil (2007), Every Child a Reader (undated but known to have been published in 2006)

Research design:	Matched groups two-group quasi-experiment
Age-range:	Y1
Type of children:	Low attainment – bottom 5-6% of the national distribution
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 a remarkable effect size. 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. Despite the attrition, the follow-up data suggest that the experimental group had made significantly more progress.
N of experimental group:	87 in 21 schools (in 5 London boroughs)
N of comparison group:	147 in 21 schools (in 5 different London boroughs) (comparison group)
Equivalence of groups:	All 10 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 8 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 be standard RR practice to vary this according to individual children's needs anyway.
Assessment used:	Children were asked to 'Write all the words you know', given 10 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.:

		pre-test		post-test		gain	effect
group	**N**	**ave.**	**(s.d.)**	**ave.**	**(s.d.)**		**size**
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	

Effect size:	1.63 (remarkable)
Statistical significances:	Experimental group's post-test average score was statistically significantly higher than the comparison group's.

Contact details for Reading Recovery
International Literacy Centre at the UCL Institute of Education, University of London:
http://www.ioe.ac.uk/research/4399.html

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5.4 Write Away Together

Write Away Together			Impact			
			modest	useful	substantial	remarkable
	Writing	*Ratio Gain*	**4.0**			✓✓✓✓
		Effect size	**n/a**			

Description

Write Away Together was developed in Redcar and Cleveland in 2001/02. Following successful implementation over several years, it was introduced to other LAs, and individual schools. 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. The programme aims to develop writing skills through discussions about independent writing. As such it links strongly into, and reinforces, Quality First Teaching. The independent writing can come from any curriculum area.

Some key aims of the Write Away Together programme are:

- 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.

Children work with a trained adult for 2 x 20-minute sessions per week for a minimum of 10 weeks. 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.

Evaluations

Data provided on 249 children showed a **remarkable** gain. 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.

Contact details for Write Away Together
http://www.fischertrust.org/lit_write_away_together.aspx

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Write Away Together: *Detailed Evaluations*	
Study:	2007-2008
Main reference:	Unpublished data gathered by Fischer Education Project Ltd. and supplied by Jill Canning

Research design:	One-group pre-test/post-test study
Age-range:	Y2-Y6
Type of children:	Low attainment (children who are not making expected gains in writing or are working below national expectations)
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 ratio gain shows remarkable progress.
N of experimental group:	249
Length of intervention in weeks:	average 12 (range 10-20)
Assessments 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

It is not usually possible to calculate RGs for writing data because there are no standardised tests yielding 'writing ages'. However, Average Point Scores were designed such that the standard gain was 1 point per term (6 points per National Curriculum level). This clearly means that these children made 4 times standard progress, hence the RG shown below. (*But N.B. this is a re-calculated figure which is lower than that originally given in the 4th Edition*.)

Average gain: 4.0 points of Average Point Score
Ratio Gain: 4.0

Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

Contact details for Write Away Together
http://www.fischertrust.org/lit_write_away_together.aspx

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CHAPTER 6: Young People Aged 14-18, including those who have offended

This chapter covers both 14- to 16-year-olds who are on school-roll 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 the raising of the 'participation age' in England to 17 in 2013 and then to 18 in 2015 probably made the need for relevant and effective schemes even more acute.

This chapter describes six relevant schemes. Where possible (which is the case for 4 schemes), each entry contains an outline description of the scheme or a cross-reference for that, followed by a few details of its evaluation and results, references and contact details, and then by an analysis of the quantitative evidence for its effectiveness. The schemes described in this chapter are so diverse that it is more difficult to summarise any general characteristics in a Table than in previous chapters, and the data are not compiled into comparative Tables in the Appendix.

	Scheme	KS4	KS5+	Read	Spell	1:1	Group	Pg
6.1	Catch Up® Literacy (for Gypsy Roma Travellers)	✓	✓	✓		✓		168
6.2	Shannon Trust: Turning Pages Reading Programme	✓	✓	✓		✓		169
6.3	Sound Reading System	✓	✓	✓	✓	✓		170
6.4	Sound Training©	✓		✓			✓	171
6.5	Summer Arts Colleges	✓	✓	✓	✓	✓	✓	174
6.6	*TextNow*	✓	✓	✓		✓		176

Table 6.1: General characteristics of the schemes for young people aged 14-18, including those who have offended

A few schemes listed in Chapter 4 have data on pupils in KS4:

- Easyread
- Rapid Plus
- That Reading Thing
- Thinking Reading.

The descriptors used throughout this book are as follows:		***Impact***			
		modest	useful	substantial	remarkable
	Ratio Gain	1-2 ✓	2-3 ✓✓	3-4 ✓✓✓	4 + ✓✓✓✓
	Effect size	0.2-0.5 ✓	0.5-0.8 ✓✓	0.8-1.0 ✓✓✓	1 + ✓✓✓✓

6.0.1 The scale of need

The Skills for Life survey (BIS, 2011) showed that 15% of 16- to 19-year-olds were attaining at below international Level 2, equivalent to UK Entry level or below (Bradshaw *et al*., 2010). 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 been so for some years, as did Brooks and Lahmar (2017) in a further detailed analysis.

The Programme for International Student Assessment (PISA) is a triennial survey of 15-year-old students around the world that assesses the extent to which they have acquired the key knowledge and skills essential for full participation in society. The assessment focuses on the core school subjects of reading, mathematics and science. Students' proficiency in an innovative domain is also assessed; in 2018, this domain was global competence. The most recent PISA (Programme for International Student Assessment) results (OECD, 2018) showed that 17% of 15-year-olds had reading attainment below international Level 2 (equivalent to UK Entry level). These students struggle to identify the main idea in a text of moderate length, find information based on explicit, though sometimes complex criteria, or reflect on the purpose and form of texts when explicitly directed to do so.

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 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). The Parliamentary Office of Science and Technology (2016: 3) reports that "within the youth custody population, of whom 78% are 15- to 17-year-olds, literacy levels have been identified as being equivalent to that of 7- to 11-year-olds or lower. Suggested low education levels have particular implications for children in custody: around two thirds of one sample did not reach the minimum level required in literacy … to understand verbal information and would therefore struggle to follow education programmes".

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

6.0.2 Outcomes other than literacy

For most providers of schemes for young people with poor literacy, improving their reading and writing would be sufficient, and virtually 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. About a fifth of the young people in the evaluation of *TextNow* had offended. However, the attitudes to reading of the young people in the evaluation of *TextNow* improved markedly. Similarly, all participants in Summer Arts Colleges and in Shannon Trust Reading Plan are offenders, and they are also a major target for Toe By Toe (see Section 4.15). 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 are not yet such data for Shannon Trust Reading Plan.

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6.1 Catch Up® Literacy *(for Gypsy Roma Travellers)*

Description

Catch Up® Literacy was initially developed in 1998 at Oxford Brookes University, in partnership with the Caxton Trust. 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. It 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). Details of how the scheme is delivered in schools is outlined in Section 2.4.

Evaluations

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 ratio gain 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.

The data presented in previous chapters indicates that when used at Primary-level, useful to **remarkable** progress in accuracy is possible. Secondary-level data showed useful to **substantial** progress in reading comprehension. A 2008 evaluation with looked-after children demonstrated useful to **remarkable** impact on comprehension.

Contact details for Catch Up® Literacy
Julie Lawes, Director
www.catchup.org

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6.2 Shannon Trust: Turning Pages Reading Programme

Description

Shannon Trust was established in 1997 and is a UK-wide charity which works with custodial establishments (including Young Offender Institutions) in England, Wales and Northern Ireland. The Trust and the establishments jointly run the Shannon Trust Reading Plan, which is delivered by peer mentors in prisons and by Learning Support Assistants in YOIs.

In July 2015, Shannon Trust introduced *Turning Pages Reading Programme*, which had been developed specifically by experts for adults and to be delivered by Peer Mentors. *Turning Pages* development was overseen by an Advisory Group comprising Shannon Trust Staff, UCL Institute of Education, National Offender Management Service, a Shannon Trust Trustee with a dyslexia specialism and experience of producing materials for emergent readers, and a (released) Shannon Trust Mentor. It was trialled at two prisons (Male and Female) and (in the initial stages) a prison which included Young Offenders.

Shannon Trust staff and volunteers work with prisons to train prisoner mentors/LSAs in how to use *Turning Pages Reading Programme*, 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, heath care, workshops, segregation and all areas of the establishment. Teaching takes place for 20 minutes a day, 5 days a week.

Evaluations

In October 2015 Birmingham City University commenced an evaluation in respect of the effectiveness of *Turning Pages Reading Programme* in improving reading ability and the wider benefits/outcomes to Learners and Mentors of involvement in Shannon Trust Reading Plan. Significant gains in word reading and non-word reading scores were found for the group of learners involved in the *Turning Pages* evaluation during the first three months and from baseline to the final six-month period. Ratio gains and effect sizes were not provided and cannot be calculated.

Contact details for Reading for Shannon Trust Reading Programme
http://www.shannontrust.org.uk
communications@shannontrust.org.uk

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6.3 Sound Reading System

Description

The *Sound Reading System* is a synthetic phonics reading and spelling programme based on the work of Professor Diane McGuinness, who has been actively involved in its development, utilising research data spanning 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. Pupils learn that the English writing system is a code, and precisely how this code works. The intervention is delivered 1-1, by specially trained teachers, LSAs, Teaching Assistants and SENCos.

Evaluations

In April 2007 a number of staff at Warren Hill Prison and Young Offender Institution 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 10 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 1 month to 35 months, with the mode being in excess of 12 months. Spelling also improved, the range being 1 month to 25 months, with the mode being in excess of 3 months.

Data from Primary-level studies (see Section 2.23) showed **remarkable** progress in reading accuracy, comprehension and spelling.

Contact details for Sound Reading System
Fiona Nevola
info@soundreadingsystem.co.uk

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6.4 Sound Training©

(formerly Sound Training for Reading)

Sound Training©			Impact			
			modest	useful	substantial	remarkable
 Reading (Accuracy)	*Ratio Gain*	**29.3**				✓✓✓✓
	Effect size	**0.97**			✓✓✓	
 Reading (Comp)	*Ratio Gain*	**8.7**				✓✓✓✓
	Effect size	**n/a**				

Description

This scheme was developed by Katy Parkinson in Middlesbrough to help pupils in KS3 with reading difficulties. It is now used in KS2 and KS4 as well. At Secondary-level, pupils, in groups of four, attend six 1-hour sessions over a period of six weeks. Delivery is very intensive and repetitive using multi-sensory teaching methods.

Pupils are explicitly taught syllabification. All tasks must be completed accurately, fluently and automatically in order to progress. Pupils are given instruction on short and long vowel sounds along with an explanation of open and closed syllables. (A fuller explanation of the programme is in Section 2.24.)

Evaluations

In 2010-11 the scheme was used with a group of KS4 pupils in 2 schools in Middlesbrough, and in 2011-12 with two groups, one of KS4 pupils in 2 schools in Middlesbrough and County Durham, the other a group of Y11 pupils in 3 London schools. The results showed **remarkable** impacts on reading accuracy and comprehension.

In 2012-15 data were gathered on 2,127 KS4 pupils. They made a **remarkable** gain in reading accuracy.

Data from primary schools (Section 2.24), and KS3 (4.10), show **remarkable** impact on reading accuracy.

Contact details for Sound Training©
Katy Parkinson
enquiries@soundtraining.co.uk

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Sound Training©: *Detailed Evaluations*	
Study:	2010-2012, Small-scale Studies
Main reference:	Unpublished data supplied by Katy Parkinson

Research design:	Three one-group pre-test/post-test studies
Age-range:	(2010-11, & 2011-12, 1st cohort) KS4 (2011-12, 2nd cohort) Y11
Type of children:	Mainstream pupils with reading ages on average 3 years below chronological age
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.
N of experimental group:	(2010-11) 44 in 2 schools in Middlesbrough (2011-12) 35 in 2 schools in Middlesbrough & Co. Durham (2011-12) 39 in 3 schools in London
Length of intervention in weeks:	6 (1.5 months used in calculating RGs)
Tests used:	(2010-11, & 2011-12, 1st cohort) WRAT4 (decoding). (2011-12, 2nd 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 ratio gains:

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 ratio gain:

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

Effect sizes:	n/a
Statistical significances:	(2010-11, & 2011-12, 1st cohort) $p<0.001$ (2011-12, 2nd cohort) Was not stated and could not be calculated

Contact details for Sound Training©
Katy Parkinson
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Sound Training©: *Detailed Evaluations*	
Study:	2012-2015, Large-scale data-gathering
Main reference:	Unpublished data supplied by Katy Parkinson

Research design:	One-group pre-test/post-test study
Age-range:	Y10-Y11
Type of children:	Mixed-ability mainstream pupils, none 'statemented' but some with reading ages well below chronological age
Starting and ending levels and progress:	The average c.a. of pupils entering Y10-11 is 15.0, so this sample were well behind, on average. They made remarkable progress by both impact measures, such that their average ending level was above their average chronological age.
N of experimental group:	2,127 in 100+ schools across England / Wales
Length of intervention in weeks:	6 (1.5 months used in calculating RG)
Tests used:	WRAT 4

Pre- and post-test average standardised scores (ss) and s.d's in ss points, average r.a's and s.d's in years and decimal years, gains in reading accuracy and s.d's in same units, ratio gain, and effect size calculated using the s.d. of the test (15.0):

	pre		**post**		**gain**		**RG**	**effect**
	ave.	**(s.d.)**	**ave.**	**(s.d.)**	**ave.**	**(s.d.)**		**size**
ssp	97.0	(14.2)	111.5	(18.5)	14.6	(12.3)		0.97
r.a.	13.2	(2.9)	16.0	(2.8)	32.0	(23.7)	21.3	

Effect sizes:	0.97 (substantial)
Statistical significances:	Were not stated and could not be calculated

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6.5 Summer Arts Colleges

Description

The Summer Arts Colleges programme was founded in 2005, as part of a strategic partnership between the Youth Justice Board and Arts Council England. Between 2008 and 2016 the Summer Arts Colleges engaged with over 3,000 young people from the care and criminal justice system across England.

The Unitas charity (which also runs the *TextNow* programme) co-ordinated the Summer Arts Colleges programme, and distributed funding to individual Youth Offending Teams (YOTs) to run courses in their areas. Each Summer Arts College provided 10 young people with a programme of structured arts activities for 25 hours per week, and ran for three, five or six weeks during the summer holiday. Young people taking part in the Summer Arts Colleges worked towards achieving a mainstream qualification – and over 95% of young people who completed the programme achieved three nationally recognised Arts Awards. At the end of the Summer Arts College, a celebration event was held to display or perform the work that the young people had done.

There is no prescribed content for a Summer Arts College; 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 Youth Offending Team to arrange. The Summer Arts College programme fulfils the supervision requirement of these orders with a structured programme of activity.

Evaluations

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.

Contact details for Reading for Summer Arts Colleges
https://unitas.uk.net/summer-arts-colleges/

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Summer Arts Colleges: *Detailed Evaluations*	
Study:	2007-2010, England & Wales
Main reference:	Tarling and Adams (2011)

Research design:	One-group pre-test/post-test study
Age-range:	12-19 (average 16:6 at pre-test)
Type of children:	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.
Starting and ending levels and progress:	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. ETE: In the 4 weeks before the programme, 54% were **not** in education, training or employment; in the 4 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.
N of experimental group:	830 across 67 Youth Offending Team areas in England and Wales
Length of intervention In weeks:	3, 5 or 6
Tests used:	Basic Skills Agency *Initial Assessment*. This test delivers only raw scores, which can be converted to NQF levels.
Since the Basic Skills Agency *Initial Assessment* provides neither reading ages nor standardised scores, impact has to be judged from the measures it does provide.	
Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

Contact details for Reading for Summer Arts Colleges
https://unitas.uk.net/summer-arts-colleges/

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6.6 *TextNow*

TextNow			***Impact***			
			modest	useful	substantial	remarkable
 **Reading (Accuracy)**	*Ratio Gain*	**5.9**				✓✓✓✓
	Effect size	**0.51**		✓✓		

Description

TextNow is run by the educational charity Unitas (which also runs the Summer Arts Colleges – Section 6.5). *TextNow* consists of a 20-minute reading session each weekday for 10 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. Intended for young people aged 10-18 in the care system, or who have offended, who struggle with reading, 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/self-esteem by encouraging young people to explore different reading material; read alone; navigate services including libraries.

Between 2008 and 2014, a total of 125 children and young people, of whom 118 were based in foster care and 7 in a Children's Home, took part in the usual 'face-to-face' model of *TextNow* at 15 looked-after children sites across England and Wales. In 2015 Unitas trialled a 'virtual school' model designed for looked-after children in foster care, which was due to be rolled out nationally in 2016.

Evaluations

An analysis of the 2008-14 data for looked-after children showed a **remarkable** improvement in reading accuracy.

Analysis of data from 2008-11, with a total of 926 young people showed that the participants' average reading level at the outset was almost 5 years below their average chronological age, and that the scheme had **remarkable** impact. The young people's attitudes also improved markedly.

Contact details for *TextNow*
https://unitas.uk.net/

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TextNow: *Detailed Evaluations*

Study:	2008-2011
Main reference:	Brooks and Tarling (2012), Brooks, Tarling and Adams (2012)

In the three years 2008-11, 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.
Disclosure: *The Unitas charity commissioned and paid Greg Brooks to help evaluate this scheme, using the 2008-11 data; he analysed the data in the same way as for any other scheme, and submitted the details to independent scrutiny.*

Research design:	One-group pre-test/post-test study
Age-range:	Ages 7-19
Type of children:	Young people who struggle with reading, both in mainstream education and those disengaged from it, including some offenders
Starting and ending levels and progress:	On average pupils were 4:10 behind in r.a. at start, 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 ratio gain of 5.5 means that they made 5½ months' progress in reading for each month of the programme.
N of experimental group:	926 at pre-test, (post-test N was 663 after some data were discarded). Within this group, 115 were young people who had offended.
Length of intervention in weeks:	13-14 (average 3.3 months between pre- and post-test)
Test used:	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), ratio gains, and effect sizes calculated as gain divided by the s.d. of the test (15.0):
The sample sizes for standardised scores are smaller than for reading ages because many of the participants were aged over 16:6 at post-test, and therefore out of range of the conversion table.

1) Full sample	**N**	**pre**	**post**	**gain**	**ratio gain**	**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
2) Young people who had offended (subset of full sample)	**N**	**pre**	**post**	**gain**	**ratio gain**	**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

Effect sizes:	0.49-0.51 (useful)
Statistical significances:	p<0.001 for both measures in both tables

Contact details for *TextNow*
https://unitas.uk.net/

CHAPTER 7: Specific Special Educational Needs & Disabilities, including Dyslexia/SpLD

This chapter is intended to draw together some of the scattered information on provision for a disparate range of children with specific educational needs and disabilities (as opposed to those simply described generally as 'SEN' – for schemes with that description of the target population see Chapters 2, 4 and 5). It describes 10 relevant schemes (though three are variants or developments of The Reading Intervention Programme). For each of the 10 schemes which have analysable quantitative data its entry contains an outline description of the scheme itself, followed by a few details of its evaluation and results, references and contact details, and then by an analysis of the quantitative evidence for its effectiveness.

N.B. Because some of the studies in this chapter were *sui generis*, their data are not compiled into comparative Tables in the Appendix.

	Scheme	Autism Spectrum	Complex	Down Syndrome	Dyslexia	Looked-after CYP	Length (weeks)	Weekly time requirements	1:1	Group	Pg
	Section 7A										
7.1	Units of Sound				✓		20-26	Variable	✓		181
7.2	Wordshark				✓		15	Variable	✓		184
7.3	Catch Up® Literacy					✓	28	2x 15-mins	✓		186
7.4	Letterbox Club					✓	26	Variable	✓		188
7.5	*TextNow*					✓	10	Variable	✓		191
7.6	Inference Training	✓					16	5x 30mins		✓	193
7.7	Personalised Learning for Reading (PLR)		✓				13	5x 15mins	✓		195
	Section 7B										
7.8	The Reading Intervention Programme				✓		12-25	3x 30mins	✓		199
7.9	The Reading Intervention Programme (REACH)				✓		20	3x 30mins	✓		203
7.10	The Reading Intervention Programme (REVI+)			✓			20	3x 30mins	✓		207

Table 7.1: General characteristics of the schemes for children with specific SEN, including Dyslexia/SpLD

The descriptors used throughout this book are as follows:

	Impact			
	modest	useful	substantial	remarkable
Ratio Gain	1-2 ✓	2-3 ✓✓	3-4 ✓✓✓	4 + ✓✓✓✓
Effect size	0.2-0.5 ✓	0.5-0.8 ✓✓	0.8-1.0 ✓✓✓	1 + ✓✓✓✓

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7.0.1 Focus

Section 7A concerns children with specific difficulties, notably Dyslexia/SpLD, but there are also mentions, at least, of children receiving free school meals, looked-after children, children with other specific profiles (including ADHD, autism spectrum disorder, speech and language difficulties), and children with moderate learning difficulties.

Section 7B focuses on the work of the team who devised and researched the Reading Intervention Programme. The studies here are part of the ongoing 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. Included in Chapter 8 are some reflections on their search for ways to prevent problems arising in the first place via accurate early identification of, and tailored schemes for, children who are likely to struggle.

Possibly the most widely used scheme for children with low attainment, including many with poor and disruptive attitudes, is Achievement for All (Achieving Schools) – abbreviated to afa3as. In May 2020 the Education Endowment Foundation published an evaluation of Achievement for All (AfA), following its use in over 4,000 schools in England. The evaluation summarised a randomised control trial between 2016-2018 in 134 primary schools to test its impact on children in Key Stage 2: *"AfA resulted in negative impacts on academic outcomes for pupils who received the programme during five terms of Years 5 and 6 (ages 9-11). Children in the schools which received AfA made 2 months' less progress in reading and maths, compared to similar children in the control group of schools which continued with their usual practice. The same negative impact was found for children eligible for free school meals."* The evaluation concluded that AfA did not improve KS2 pupils' academic outcomes and had a detrimental effect on learning. Further information is contained within the full report (https://educationendowmentfoundation.org.uk/news/achievement-for-all-answers-to-key-questions-for-schools/ accessed 11/09/2020).

7.0.2 Children in England receiving support through the Pupil Premium

By far the largest group of children with special needs is those receiving free school meals (FSM). 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 and service children). In 2019-20 it is being paid at various rates between £300 and £2300 per child, depending on circumstances (https://www.gov.uk/government/publications/pupil-premium-allocations-and-conditions-of-grant-2019-to-2020/pupil-premium-conditions-of-grant-2019-to-2020 accessed 11/09/2020).

In 2019 the Education Endowment Foundation published updated guidance on use of the Pupil Premium. This stated that "targeted support for struggling pupils should also be a key component of an effective Pupil Premium strategy; as well as strategies that relate to non-academic factors, including improving attendance, behaviour and social and emotional support".

Section 7A

Dyslexia/SpLD

It is likely that many of the schemes for mainstream children listed in Chapters 2 and 4 where the participants are categorised in the data analyses as 'SEN' or 'low attainment' would include some children with dyslexia/SpLD. In this section, however, we consider schemes whose providers say they are specifically for children with dyslexia/SpLD, or where the participants are described as dyslexic. In the introduction to this section in the 5th edition Greg Brooks wrote:

> ***"****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).****"***

Thinking in this area has of course moved on. Snowling and Hulme's distinguishing of dyslexia from poor reading comprehension remains valid (though some children suffer both problems and need even more specialist attention). But Elliott and Grigorenko (2014) have raised powerful objections to all attempts to identify a subgroup of poor readers/spellers who have dyslexia and distinguish them from other poor readers/ spellers (the subgroup labelled, somewhat dismissively, by Stanovich, 1988 as 'garden-variety'). Elliott (2020) in his article "It's Time to Be Scientific About Dyslexia" argues further that the seemingly scientifically based construction of the dyslexic individual often undermines attempts to identify and help all of those who struggle to learn to read.

Some dyslexia advocates still maintain that distinction is valid, but most recently Maggie Snowling, in her book Dyslexia: a very short introduction (2019), has instead effectively labelled all poor readers/spellers 'dyslexic'. We endorse this stance, and therefore use 'dyslexia/SpLD' as shorthand for 'all forms of underperformance in reading and/or spelling'. 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. Here, therefore, we discuss the limited number of studies with large or even modest sample sizes.

Relevant studies here: Units of Sound; Wordshark; The Reading Intervention Programme; REACH (Reading for Comprehension)

Looked-after children

Relevant studies here: Catch Up® Literacy; the Letterbox Club and *TextNow*.
The A.R.R.O.W. ™ programme (see chapter 2) has also been used with a small number of looked-after children.

'Complex Needs' (including Autism Spectrum)

Relevant studies here: Inference Training; Personalised learning for Reading.

7.1 Units of Sound

Units of Sound				Impact			
				modest	useful	substantial	remarkable
	**Reading (Accuracy)**	*Ratio Gain*	**n/a**				
		Effect size	**0.49**	✓			
	**Spelling**	*Ratio Gain*	**n/a**				
		Effect size	**0.37**	✓			

Description

Units of Sound 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. The programme uses revisiting, or 'spiral learning' to introduce and then further develop literacy skills. The scheme is designed for students from age 7 to adults, and is used in all types of mainstream and independent schools and colleges. From 2005, Dyslexia Action used Units of Sound as a core component of its Partnership for Literacy (P4L) school intervention projects. In P4L, a Dyslexia Action teacher works alongside teachers and TAs, using apprenticeship training as a way of embedding good practice within the school. The secondary school version has two models reflecting the different needs of students. In the first, students with the more severe literacy needs are given weekly lessons in school. In the second model, underperforming students with less severe needs are shown how to use Units of Sound in school, but then work mostly independently at home or after school.

Evaluations

Data are evaluated on 147 children who had received the full Dyslexia Action P4L intervention. The results showed **modest** benefits for both reading accuracy and spelling. In 2012 the Education Endowment Foundation commissioned an independent RCT evaluation of the scheme from the University of York. However, the evaluation (Sheard *et al*., 2014) encountered severe problems and did not deliver any clear result; hence the findings presented here are not contradicted. An external RCT evaluation of the home-supported Secondary-level version was carried out by the Centre for Evaluation and Monitoring (CEM) at Durham University in 10 schools in England. This showed a **modest** impact on reading accuracy. Rack's 2011 study shows **modest** impact on both accuracy and spelling.

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Units of Sound: *Detailed Evaluations*	
Study:	Partnership for Literacy, 2008-2009
Main reference:	Rack (2011)

Research design:	One-group pre-test/post-test study
Age-range:	Y2-Y5
Type of children:	Identified as having dyslexia
Starting and ending levels and progress:	Both starting levels were just over 1 s.d. below the mean, and therefore below the 16th percentile. By the end modest progress had been made in both skills, and the ending levels were about ⅔ of an s.d. below the mean.
N of experimental group:	147 in 10 schools in several LAs
Length of intervention in weeks:	20
Tests used:	WRAT4

Pre- and post-test average standardised scores and s.d's, gains (s.d's not stated) and effect sizes:

	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

Effect sizes:	0.37-0.49 (modest)
Statistical significances:	p<0.001 in both cases

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Units of Sound: *Detailed Evaluations*	
Study:	2010, England
Main reference:	King and Merrell (2012)

Research design:	Randomised Control Trial (RCT)
Age-range:	Y7-Y9
Type of children:	Low attainment
Starting and ending levels and progress:	Both starting levels were just under 1 s.d. below the mean, and therefore at about the 16th percentile. By the end the experimental group had made good progress, its ending level being about ⅔ of an s.d. below the mean, while the control group had made very little progress and were still almost a full s.d. below the mean.
N of experimental group:	118 in 10 schools in several LAs (+ 89 controls in same schools)
N of control group:	89 in same schools
Equivalence of groups:	Pre-test difference non-significant
Length of intervention in weeks:	26 (average; range 5-7 months)
Tests used:	WRAT4

Pre- and post-test average standardised scores and s.d's for reading accuracy, gains (s.d's not stated) and effect size:

group	**pre**		**post**		**gain**	**effect**
	ave.	**(s.d.)**	**ave.**	**(s.d.)**	**ave.**	**size**
experimental	86.0	(3.3)	90.4	(7.9)	4.4	0.27
control	86.0	(3.3)	88.4	(7.1)	2.4	

Effect sizes:	0.27 (modest)
Statistical significances:	p=0.008

Contact details for Units of Sound
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7.2 Wordshark

Wordshark			Impact			
			modest	useful	substantial	remarkable
 Reading (Comp)	*Ratio Gain*	**2.9**		✓✓		
	Effect size	**n/a**				

Description

Wordshark (and Wordshark Online) is a computerised teaching resource for improving spelling, reading and motivation, and is designed for pupils in Key Stages 1-3. Wordshark is used in 11,000+ schools worldwide.

It uses over 70 games addressing different subskills to reinforce reading and spelling. The program uses synthetic phonics, as well as a whole-word approach. One of the spelling courses available is set out in the order of the English National Curriculum. Wordshark Online allows students to access the program from home, learning independently and teachers can monitor student usage remotely, setting specific work or choosing automatic progression.

Evaluations

Veronica Shoebotham, an experienced Learning Support teacher holding dyslexia qualifications (AMBDA), carried out a small-scale quasi-experiment in 5 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.

Contact details for Wordshark
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www.wordshark.co.uk

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Wordshark: *Detailed Evaluations*	
Study:	2010, Birmingham
Main reference:	Unpublished data supplied by Veronica Shoebotham

Research design:	Matched-groups two-group quasi-experiment
Age-range:	6:1-10:9 at pre-test
Type of children:	Dyslexia/SpLD
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.
N of experimental group:	26 in 5 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
Test used:	Salford Sentence Reading
Ratio gains as stated by author:	
	RG
experimental group	2.9
comparison group	1.4
Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

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7.3 Catch Up® Literacy *(for looked-after children)*

Catch Up® Literacy			Impact			
			modest	useful	substantial	remarkable
	**Reading (Comp)**	*Ratio Gain*	**4.0**			✓✓✓✓
		Effect size	**n/a**			

Description

Catch Up® Literacy was initially developed in 1998 at Oxford Brookes University, in partnership with the Caxton Trust. 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. It 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.
- Then a *linked writing* or spelling activity based on the child's earlier miscues earlier. The adult helps the child with the reading and spelling of the words using multiple methods, including phonics and visual recognition of irregular words.

Evaluations

A 2008 evaluation with looked-after children demonstrated useful to **remarkable** impact on comprehension. 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. Gains in confidence and self-esteem were also widely reported.

Primary-level data presented in Section 2.4 show useful to **remarkable** progress in reading accuracy. Secondary level data in Section 4.3 showed useful to **remarkable** progress in comprehension.

Contact details for Catch Up® Literacy
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Catch Up® Literacy: *Detailed Evaluations*	
Study:	Looked-after Children, 2008
Main reference:	Holmes *et al*. (2011: 15-16)

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.

Research design:	One-group pre-test/post-test study
Age-range:	Aged between 11 and 14
Type of children:	Reading ages were on average more than two years below their chronological ages
Starting and ending levels and progress:	The ratio gains show useful to remarkable progress. Gains in confidence and self-esteem were also widely reported.
N of experimental group:	36
Length of intervention in weeks:	28
Tests used:	Not stated

Ratio gains in reading comprehension:

	RG
Leicestershire (6-month post-test)	4.0
Leicestershire (12-month post-test)	1.9
Norfolk (5-month post-test)	2.9
Norfolk (7-month post-test)	2.4

Effect sizes:	n/a
Statistical significances:	Were not stated and could not be calculated

Contact details for Catch Up® Literacy
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7.4 Letterbox Club

Letterbox Club			Impact			
			modest	useful	substantial	remarkable
	Reading (Accuracy)	*Ratio Gain*	**n/a**			
		Effect size	**0.24**	✓		
	Reading (Comp)	*Ratio Gain*	**n/a**			
		Effect size	**0.29**	✓		

Description

The project began at the University of Leicester in 2002. The intervention comprised 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 contained reading materials, story CDs, stationery and mathematics games at the child's own level of attainment. The aim was to improve looked-after children's engagement with reading for pleasure, and support their attainment in reading and number. Adult involvement was encouraged but not required.

Small-scale pilot work took place in two LAs in England from 2003 to 2006, and a partnership with BookTrust was established. This was followed by funding by the (then) Department for Children, Schools and Families. In 2007-08, 1,600 children in 23 LAs in England received parcels. In 2009 the scheme was 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 also a pilot in two LAs in Scotland in 2009-11, and another in 5 LAs there in 2013. In 2010 the age range was extended into secondary schools, and an additional option was provided for children aged 7 to 9 who have not yet started reading independently. Membership of the Letterbox Club is now open to any child who could benefit, including those placed for adoption and those requiring post-adoption support. Subscriptions are usually taken out through each child's LA.

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 were independent evaluations of its use in primary schools in Northern Ireland in 2009-10. All the quantitative results showed **modest** gains in reading.

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Letterbox Club: *Detailed Evaluations*	
Study:	England & Wales, 2007-2010
Main reference:	Griffiths (2012), Griffiths *et al*. (2008, 2010), Griffiths and Comber (2011)

Research design:	Several one-group pre-test/post-test studies
Age-range:	Y3-Y8
Type of children:	Looked-after
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 helpful for these children.
N of experimental group:	765 in KS2 38 in KS3
Length of intervention in weeks:	26
Test used:	Neale, 1997 edn

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

Effect sizes:	0.17-0.29 (modest)
Statistical significances:	(Y3-4 & Y5-6) Gains stated by authors to be significant; (Y7-8) Not stated and could not be calculated

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Letterbox Club: *Detailed Evaluations*	
Study:	Northern Ireland, 2009-2010
Main reference:	Winter *et al*. (2011)

Research design:	One-group pre-test/post-test study
Age-range:	P3-P7 (Y2-Y6)
Type of children:	Looked-after
Starting and ending levels and progress:	At the start these children were on average about ⅔ 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.
N of experimental group:	268
Length of intervention in weeks:	26
Test used:	Neale, 1997 edn

Pre- and post-test average standardised scores and s.d's, average gain in standardised score points (s.d's not stated), effect sizes calculated using the s.d. 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

Effect sizes:	0.23-0.24 (modest)
Statistical significances:	p<0.0005 for accuracy and for comprehension

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7.5 *TextNow* *(for looked-after children and young people)*

TextNow			Impact			
			modest	useful	substantial	remarkable
 Reading (Accuracy)	*Ratio Gain*	**6.3**				✓✓✓✓
	Effect size	**0.48**	✓			

Description

TextNow is run by the educational charity Unitas (which also runs the Summer Arts Colleges – Chapter 6). *TextNow* consists of a 20-minute reading session each weekday for 10 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. Intended for young people aged 10-18 in the care system, or who have offended, who struggle with reading, 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/self-esteem by encouraging young people to explore different reading material; read alone; navigate services including libraries.

Between 2008 and 2014, a total of 125 children and young people, of whom 118 were based in foster care and 7 in a Children's Home, took part in the usual 'face-to-face' model of *TextNow* at 15 looked-after children sites across England and Wales. In 2015 Unitas trialled a 'virtual school' model designed for looked-after children in foster care, which was due to be rolled out nationally in 2016.

Evaluations

An analysis of the 2008-14 data showed a **remarkable** improvement in reading accuracy for looked-after children, according to the ratio gain.

Data for an evaluation of the scheme used with 926 young people between 2008-2011 are presented in Section 6.6, and that the scheme had **remarkable** impact. The young people's attitudes also improved markedly.

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TextNow: *Detailed Evaluations*	
Study:	2008-2014, England & Wales
Main reference:	Adams (2014)

Research design:	One-group pre-test/post-test study
Age-range:	Ages 5-17
Type of children:	Looked-after children and young people who struggle with reading
Starting and ending levels and progress:	Given that the average chronological age of these young people was 12 years 3 months at pre-test and 12 years 6 months at post-test, we can see that on average they were 2 years 11 months behind in reading age to start with, but during the programme caught up by 18 months of reading age, and were then on average 1 year 8 months behind. The ratio gain of 6.3 means that they were making more than six months' progress in reading for each month the programme lasted – a very fast rate of improvement. The effect size was moderate, but based on a subset of the participants.
N of experimental group:	125 at pre-test, 84 at post-test, but 4 had scored at ceiling at pre-test and their data were discarded; effective post-test N was therefore 80
Length of intervention in weeks:	10
Tests used:	NFER Single Word Reading Test 6-16 (at the time; later switched to Literacy Assessment Online: Reading Comprehension 6–14)

Pre- and post-test average r.a's (in years and months) and standardised scores, and average gains in months of r.a./standardised score points (s.d's not stated), ratio gain, and effect size calculated as gain divided by the s.d. of the test (15.0):

	N	Pre	Post	gain	RG	effect size
Reading age	80	9:4	10:10	18 months	6.3	n/a
Standardised score	64	94.0	101.1	7.1 points	n/a	0.48

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

Effect size:	0.48 (modest)
Statistical significances:	p<0.001 for both measures

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7.6 Inference Training *(for children on the autism spectrum)*

Inference Training			Impact			
			modest	useful	substantial	remarkable
	**Reading (Comp)**	*Ratio Gain*	**6.3**			✓✓✓✓
		Effect size	**n/a**			

Description

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

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. See Yuill and Oakhill (1988) for an overview of this research. 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

Data are presented for 24 pupils with ASD. Inference Training for pupils with ASD shows **remarkable** impact on comprehension. Primary-level studies (Section 2.12) also demonstrate **remarkable** impact on accuracy and comprehension skills. Secondary-level data (Section 4.7) showed a **substantial** gain in reading accuracy.

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Inference Training: *Detailed Evaluations*	
Study:	Adaptation for children on the autism spectrum
Main reference:	Unpublished data supplied by Emma-Jane Kehoe via Tony Whatmuff

The scheme as used in Leicester was adapted for pupils with ASD by Emma-Jane Kehoe and evaluated as her PhD. In her own words*: "I adapted the training package to include the specific difficulties children with autism have with reading comprehension and inference and why. This goes beyond a basic understanding of autism, as it involves detailed and flexible knowledge of psychological theories and how these interplay with development issues and autism-specific differences..… The adaptations I provided were:*

- who, what, where, when, how, what happened? Symbols to support question generation
- using a timer for discussion
- use of a second adult who acted as another participant, NOT a teacher support
- symbols for the 'Get Visual' section - 'for thoughts people have' - 'for what is said' – 'detective work, for explaining'
- all groups were called 'Literacy Detectives' rather than 'inference'."

Research design:	One-group pre-test/post-test study
Age-range:	Y5-13 (average age 12:9 at pre-test)
Type of children:	All with autistic spectrum disorder
Starting and ending levels and progress:	Given that these children's average chronological age at pre-test was 4 years above their average reading age, most were clearly very far behind, especially the older ones. Even at post-test the gap was still just over 2 years. The fact that the s.d. of the gains is considerably larger than the average gain itself reflects the very wide range of gains and losses, from -38 months to +99 months of r.a. The RG shows remarkable progress in reading comprehension, but these pupils would need continuing specialist support.
N of experimental group:	24 in 9 schools across England (comprising 3 special schools, 3 mainstream primary, 2 mainstream secondary, 1 mainstream secondary with a designated specialist unit).
Length of intervention in weeks:	16
Test used:	Hodder Access

Pre- and post-test average r.a's and s.d's in years and months, average gain and s.d. in months of r.a. for comprehension, and ratio gain:

pre		**post**		**gain**		**RG**
ave.	**(s.d.)**	**ave.**	**(s.d.)**	**ave.**	**(s.d.)**	
8:9	(3:3)	10:10	(3:7)	25.1	(34.2)	6.3

Effect sizes:	n/a
Statistical significances:	p<0.001

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7.7 Personalised Learning for Reading (PLR) *(for children with a range of specific educational needs)*

Personalised Learning for Reading (PLR)			Impact			
			modest	useful	substantial	remarkable
	**Reading (Comp)**	*Ratio Gain*	**4.0**			✓✓✓✓
		Effect size	**n/a**			

Description

Working in partnership with colleagues from CfBT, the CLASS (Communication, Learning and Autism Support Service) part of Children's Services in East Sussex ran Personalised Learning literacy project with Y3 pupils in 45 schools in 2006. Following successful pilots, PLR continues to be used in many East Sussex schools, in Key Stages 2 and 3, as well as Key Stage 1. Although essentially targeting reading, it is an intervention that impacts also on writing, building independence skills, and self-esteem. CLASS delivers 2-day PLR training courses, bi-annually, for East Sussex schools but available to out-of-county schools too.

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. 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. In Y3, staff worked with selected children on a 1:1 basis for 15 minutes a day over three months. The programme for the Year 1 cohort differed only slightly as a response to findings from the original project, in that writing was given more prominence, as were pupil voice and parental involvement.

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. Support was made available from the LLSS via e-mail and through visits where teaching was observed and feedback given.

Evaluations

The East Sussex team collected their own evaluation data, which showed substantial to **remarkable** gains of nearly a year of reading age in three months in Year 3, and a whole year of reading age in three months in Year 1.

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Personalised Learning for Reading (PLR): *Detailed Evaluations*	
Study:	2006-2007, East Sussex
Main reference:	Unpublished data supplied by Linda Perry and Carole Price

Research design:	Two one-group pre-test/post-test studies
Age-range:	Y1-Y3
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.
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.
N of experimental group:	69 in 45 schools (2006); 23 in 13 schools (2007)
Length of intervention in weeks:	12
Test used:	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 ratio gains:

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

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Section 7B - The Reading Intervention Team's search for what might work for children who struggle the most

As pointed out in section 2.27, two series of experiments can be analysed as having arisen from the Cumbria Reading with Phonology 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 2.27, the other here. In November 2015, prior to the 5th edition, Maggie Snowling and Charles Hulme kindly sent the following summary of their principal research findings over 30 years:

> "Since the landmark publication of Hatcher, Hulme and Ellis (1994), we and our colleagues have been developing and evaluating interventions for language and literacy difficulties in educational settings using robust methodologies. The findings of these studies show:
>
> (i) It is possible in primary school settings to improve basic reading skills by training phoneme awareness and letter knowledge in the context of systematic reading practice using books. This is in line with international findings regarding how best to improve reading fluency. We have evaluated this approach when delivered in whole class settings by class teachers (Hatcher, Hulme and Snowling, 2004), in Year 1 delivered to poor readers by teaching assistants (TAs) (*Reading Intervention*) (Hatcher *et al*., 2006), and in the early years to children with poor oral language skills (*Nuffield Phonology and Reading*) (Bowyer-Crane *et al*., 2008). Such an approach is also effective for improving the basic reading skills of children with Down syndrome (supplemented by training in vocabulary and oral narrative) (Burgoyne *et al*., 2012).
>
> (ii) Children who respond poorly to Reading Intervention tend to have oral language weaknesses (Duff *et al*., 2009). It is possible to improve oral language skills in children by interventions focusing on developing listening skills, vocabulary and narrative skills (*Nuffield Oral Language Programme*) (Bowyer-Crane *et al*., 2008). A 15-week oral language intervention delivered in preschool can improve vocabulary knowledge, though generalisation is not good (Haley *et al*., 2016). A 30-week intervention starting in preschool and continuing through the first two terms of Reception improves oral language and narrative skills and, importantly, improvements in oral language skills generalize to produce gains in reading comprehension in Year 1 (Fricke *et al*., 2013, 2017).
>
> (iii) A 20-week oral language intervention can improve the reading comprehension skills of children in primary school (Years 4/5) (Clarke *et al*., 2010).
>
> (iv) Teaching Assistants who are trained and supported can deliver interventions for language and reading effectively. Teaching Assistants also need time to prepare the intervention sessions and they need support from class teachers with regard to timetabling.
>
> To date, this research has been funded by Nuffield Foundation, ESRC and North Yorkshire County Council, and the Education Endowment Foundation."

Two other 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/phonic programmes within a broad literacy approach. Comprehension problems relate to text level, and some effective approaches to them are scattered through this review. A few children have both problems, and need a targeted blend of the best approaches for each.

Paula Clarke's continued research into comprehension has seen the evolution of a new version of the intervention previously called README (Reading for Meaning), now called the REACH (Reading for Comprehension) intervention (Clarke *et al*., 2017). The Reach Language Comprehension intervention involves meta-cognition, reading comprehension, making inferences from text, writing stories and vocabulary training. This intervention was found to have high effectiveness through an efficacy trial (Sibieta, 2016). It should be noted that the researchers did raise some concerns with robustness of the methods, so it is possible that schools implementing this intervention in the future would not see the same level of pupil progress. Further, reading comprehension itself was not seen to improve, only skills relating to reading like word recognition improved.

Most recently the team have been undertaking work on language as a foundation for literacy. Hulme *et al* (2015) conclude that the development of reading depends critically on oral language skills, and that "children at familial risk of dyslexia show broad deficits in oral language skills in the preschool years, and a proportion of these children satisfy the criteria for the diagnosis of a language impairment". In a meta-analysis Snowling and Melby-Lervåg (2016) report that children at family risk of dyslexia experience delayed language development as infants and toddlers, while Thompson *et al* (2015) conclude that "dyslexia is the outcome of multiple risk factors and children with language difficulties at school entry are at high risk".

Three studies follow in this section:

- 7.8 - Children with specific difficulties: dyslexia or moderate learning difficulties

- 7.9 - Children with reading comprehension difficulties: REACH (Reading for Comprehension) - In previous editions listed as Reading for Meaning (README)

- 7.10 - Children with Down's syndrome: REVI+ (Reading Intervention and Vocabulary Instruction plus)

7.8 The Reading Intervention Programme *(for Children with specific difficulties: dyslexia or moderate learning difficulties)*

Introduction

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. Below you will find:

1) an evaluation of a secondary analysis of data from Hatcher's (2000) study which monitored the continued use of The Reading Intervention Programme in Cumbria which 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
2) a study on children with very low attainment (Hatcher *et al*., 2006).

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7.8 The Reading Intervention Programme *(for Children with specific difficulties: dyslexia or moderate learning difficulties)*

The Reading Intervention Programme			Impact			
			modest	useful	substantial	remarkable
	**Reading (Accuracy)**	*Ratio Gain*	**n/a**			
		Effect size	**0.48**	✓		

Description

The Reading Intervention Programme is the premier scheme to have arisen from the late 1980s/early 1990s Cumbria Reading with Phonology study. Section 2.27 contains more detailed information regarding its development in Cumbria.

Evaluations

The Reading Intervention Team's first study on children with specific difficulties was a secondary analysis of data from Hatcher's (2000) study which monitored the continued use of Reading Intervention in Cumbria – for main details on this study see section 2.27. 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 second evaluation here, which demonstrates a **modest** impact on accuracy, is of a study on children with very low attainment (Hatcher *et al*., 2006). It was an RCT conducted on a modified version of The Reading Intervention Programme delivered by teaching assistants 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 10 weeks (and acted as a control group during the first 10 weeks). The 20-week group made better progress than the control group in the first 10 weeks, but after 20 weeks the control group had caught up. Both groups had maintained their gains on average when re-tested eleven 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 to be receiving free school meals.

Three Primary-level evaluations presented in Section 2.27 demonstrated **useful** to **remarkable** progress in reading accuracy.

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The Reading Intervention Programme: *Detailed Evaluations*	
Study:	1994-1998, The Reading Intervention Team - Dyslexia / MLD
Main reference:	Subset of those in Hatcher (2000) – see section 2.27

Research design:	Matched-groups four-group quasi-experiment
Age-range:	Y2–10; data not given separately by year groups
Type of children:	SEN – all 'statemented', children with dyslexia (DYS) or moderate learning difficulties (MLD)
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.
Ns of experimental and comparison group:	29 with dyslexia (DYS) (+ 29 comparisons) 28 MLD (IQ in range 55-75) (+ 27 comparisons)
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), ratio gains, and effect sizes calculated from raw score data in article using pooled post-test s.d's:

		Reading Accuracy					**Spelling**				
Group	**N**	**Pre**	**Post**	**Gain**	**RG**	**Effect size**	**Pre**	**Post**	**Gain**	**RG**	**Effect size**
(1) DYS	29	6.6	7.4	9.6m	2.9	-0.01	6.8	7.4	7.2m	2.1	-0.34
(2) DYS Comparison	29				3.0					3.2	
(3) MLD	28	6.1	6.5	4.8m	1.4	-0.14	6.2	6.8	7.2m	2.4	-0.22
(4) MLD Comparison	27				1.7					3.0	

Effect sizes:	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.
Statistical significances:	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

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The Reading Intervention Programme: *Detailed Evaluations*	
Study:	2003-2004, The Reading Intervention Team - children in the bottom 8% nationally
Main reference:	Hatcher *et al*. (2006)

Research design:	Randomised Control Trial (RCT)
Age-range:	Y1
Type of children:	6 weakest readers in each school
Starting and ending levels and progress:	Raw scores on the EWR test do not permit characterisation of starting and ending levels, but on the BASWRT both groups were distinctly more than 1 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. In the 10 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.
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:	10 (control group received intervention in following 10 weeks)
Tests used:	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 differences in gains divided by pooled post-test s.d's:

		pre		**post**		**gain**	**effect**
Test	**group**	**ave.**	**(s.d.)**	**ave.**	**(s.d.)**	**ave.**	**size**
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	

Effect sizes:	0.43-0.48 (modest)
Statistical significances:	(EWR) p<0.001; (BASWRT) p=0.016

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7.9 REACH (Reading for Comprehension) *(for children with poor comprehension)*

In previous editions listed as Reading for Meaning (README)

Introduction

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.) 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 involved working with spoken language. In the first component, a typical session began with a 'word of the day', 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, inferencing 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, visualize, 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.

Children were 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. 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.

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7.9 REACH (Reading for Comprehension)

(In previous editions listed as Reading for Meaning (README))

REACH (Reading for Comprehension)			Impact			
			modest	useful	substantial	remarkable
 Reading (Comp)	*Ratio Gain*	**n/a**				
	Effect size	**0.99**			✓✓✓	

Description

Paula Clarke continues to research this intervention, originally called the Reading for Meaning (README) project (Clarke *et al*., 2010), and now called REACH. Members of the Reading Intervention Team turned their attention to children with reading comprehension difficulties – but Reading Intervention 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: vocabulary, reciprocal teaching with spoken language, figurative language, and spoken narrative
(2) Text Comprehension: metacognitive strategies, reciprocal teaching with text, inferencing from text, and written narrative
(3) Combined: all 8 components just listed

The README interventions were delivered by teaching assistants, 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-min sessions per week (two in pairs, one individually) for 20 weeks (30 hr of intervention per child).

Evaluations

The evaluation here is of the project when it was known as README. A total of 160 children in 20 schools were randomly assigned to one of these conditions or to a waiting-list control group (5 dropped out during the experiment, so that the total N in the analysis below is 155). The results on WIAT tests showed that all 3 experimental groups had made better progress than the control group (useful to **substantial**), and maintained their advantage at follow-up. The Oral Language group increased that advantage. On the Neale 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.

Contact details for REACH (Reading for Comprehension)
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https://essl.leeds.ac.uk/education/dir-record/research-projects/1028/reach-primary

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REACH (Reading for Comprehension): *Detailed Evaluations*	
Study:	README 2007
Main reference:	Clarke *et al*. (2010)

Research design:	4-group Randomised Control Trial (RCT)
Age-range:	Y4
Type of children:	Reading comprehension difficulties; ave pre-test standardised comprehension score on the Neale was 1 s.d. below reading fluency as measured by Test of Word Reading Efficiency
Starting and ending levels and progress:	Pre-test scores on the Neale show these children were all well behind, even though the pre-test averages on the WIAT show all 4 groups were not far below the national norm on that test. All 4 groups progressed to just over 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 were due partly to the control group losing ground on that test, but show that the 3 exp groups benefited – by post-test all 3 groups were close to the norm. **11-month follow-up** (Nov 2008-Jan 2009)**:** On the WIAT, 3 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 similar to post-test. On the Neale all 4 groups had made similar progress (3 to 4 points of raw score), and the oral group were now significantly better than the control.
Ns of experimental groups:	Oral (n=38); Text (n=40); Comb (n=38); Cont (39)
Equivalence of groups:	Randomly allocated; no statistically significant difference between groups on any measure at pre-test
Length of intervention	20 weeks
Tests used:	Wechsler Individual Achievement Test, 2nd edn; Neale 2nd revised British edn

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:

			Pre		Post		Gain	Effect	Stat.
Test	**Group**	**N**	**ave.**	**(s.d.)**	**ave.**	**(s.d.)**	**ave.**	**size**	**sig.**
	Oral	38	95.43	(7.38)	98.46	(7.05)	3.03	0.69	p<0.01
WIAT	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		
	Oral	38	16.13	(4.70)	24.00	(5.51)	7.87	0.13	ns
Neale	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		

Effect sizes:	0.13-0.99 (remarkable)

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7.10 REVI+ (Reading Intervention and Vocabulary Instruction plus)

(for children with Down's syndrome)

REVI+ (Reading Intervention and Vocabulary Instruction plus)			Impact			
			modest	useful	substantial	remarkable
 Reading (Accuracy)	*Ratio Gain*	**n/a**				
	Effect size	**0.21**	✓			

Description

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 5 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 learning support assistants, 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.

Evaluations

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). The 54 children involved were aged between 5 and 10, 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 (**modest**) than the control group in reading, but not in spelling; in phase 2 the two groups made similar progress in both skills.

Further details for REVI+ (Reading Intervention and Vocabulary Instruction plus)
http://www.down-syndrome.org/reviews/2128/?page=1

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REVI+ (Reading Intervention and Vocabulary Instruction plus): *Detailed Evaluations*	
Study:	2009, Children with Down's syndrome
Main reference:	Burgoyne *et al*. (2012)

Research design:	Randomised Control Trial (RCT)
Age-range:	Y1-Y5
Type of children:	Down's syndrome
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.
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	20 weeks
Tests used:	(Reading) Early Word Recognition, plus some words from Single-word Reading test for children who could manage this, both from York Assessment of Reading for Comprehension battery (Hulme *et al*., 2009) – maximum score 79; (Spelling) 10 words presented as pictures to be named and spelt, scored for each phoneme represented – max score 92 (see Bowyer-Crane *et al*., 2008)

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		**post**		**gain**	**effect**	**stat**
	ave.	**(s.d.)**	**ave.**	**(s.d.)**	**ave.**	**size**	**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		

Effect sizes:	0.21 (modest)
Statistical significances:	As per table

Further details for REVI+ (Reading Intervention and Vocabulary Instruction plus)
http://www.down-syndrome.org/reviews/2128/?page=1

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CHAPTER 8: Summary & Conclusions

8.1 What might prevent literacy difficulties arising in the first place?

The Reading Intervention team has ongoing research in this area, in particular the Wellcome Language and Reading project https://languageintervention.com/research-context/ (accessed 18.09.2020). Led by Professor Maggie Snowling, Professor Charles Hulme and Dr Emma Hayiou-Thomas this six-year longitudinal study from 2007-2013 investigated the nature of the developmental relationships between dyslexia and Developmental Language Disorder (DLD), tracing the development of three groups of children from when they were rising 3 in 2008 to rising 7, with a total initial sample of 260. The three groups were:

- 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.

In 2011, at 6 years of age, 56 children from the high-risk groups who were already showing reading delay one year after beginning school were selected to receive a specially designed intervention to promote language and literacy skills - RALI (Reading and Language Intervention), on which the team conducted an RCT evaluation (Duff *et al*., 2014). Children who received 9 weeks of daily intervention made no greater progress than waiting controls (89 children identified by their schools) on a composite measure of reading (effect size = 0.10), so the search continues.

In the first Reading Intervention team study in Section 7.8, 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 4½ 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 4½, 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.

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 teaching assistants daily for 20 weeks; 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 phonemic spelling, as well as transferring to non-word reading after 5 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.* (2013, 2017) went on to modify the Oral Language programme for younger children, and to supplement it for 10 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 3 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 6 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.

A parallel cautionary finding arises from Haley *et al*. (2016). They carried out an RCT on a version of the Fricke *et al*. oral language programme adapted for nursery-age children. To quote Haley *et al*.:

> Initial results revealed significant differences between the intervention and control group on measures of taught vocabulary. No group differences were found on any standardised language measure … The study suggests that a short intervention for small groups of preschool children which successfully builds vocabulary knowledge does not generalize to non-taught areas of language. The findings strike a note of caution about implementing language interventions of short duration in preschool settings.

So the search for effective preventive measures also continues.

If reading difficulties are to be prevented from arising (whatever form the prevention may eventually take), 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 develop problems). But such a procedure is unlikely to be widely adopted given the introduction of the phonics test for all Y1 children in England in 2012.

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8.2 Overall Conclusions about What Works for Literacy

None of the new evidence in this edition has led to a revision of any of the conclusions reached in the 5th 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.

1. Ordinary teaching ('no treatment') does not enable children with literacy difficulties to catch up. For the evidence on this, see the 3rd edition.

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.*

2. Schemes for improving writing are few, and further research in this area is needed.

Implication: *Provided they receive continuing support, children who make gains in writing in primary school should be better able to cope with the secondary curriculum.*

3. 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.*

4. 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.*

5. 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.*

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6. 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.*

7. 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.*

8. Where Teaching Assistants can be given appropriate training and support, they can be very effective. For evidence, see the latest Education Endowment Foundation briefing on this (EEF, 2018a).

Implication: *TAs need skilled training and support to maximise impact. A school needs to manage them so that feedback to classroom teachers is effectively and regularly given.*

9. 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.*

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APPENDIX: DETAILS OF THE ANALYSES

This Appendix provides details of the approaches to data used in the analyses in this report. Before that, the nomenclature of school years and their abbreviations are explained, and the organisation of the entries is described; and that description is followed by a number of notes of clarification. The bulk of this section is comparative Tables of the schemes' impact measures, organised by stage, skill and ratio gain or effect size.

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(rimary) 1	Pre-kindergarten	4-5
Year 1	P(rimary) 1	P(rimary) 2	Kindergarten	5-6
Year 2	P(rimary) 2	P(rimary) 3	1st grade	6-7
Year 3	P(rimary) 3	P(rimary) 4	2nd grade	7-8
Year 4	P(rimary) 4	P(rimary) 5	3rd grade	8-9
Year 5	P(rimary) 5	P(rimary) 6	4th grade	9-10
Year 6	P(rimary) 6	P(rimary) 7	5th grade	10-11
Year 7	P(rimary) 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
Year 12	S(econdary) 5	S(econdary) 6	11th grade	16-17
Year 13	S(econdary) 6	S(econdary) 7	12th grade	17-18

Abbreviations:

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

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A.1 Introduction to the data

The entries following each programme description in chapters 2-7 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 and date when it was implemented	
Main reference(s)	
Research design	1)
Age-range of children involved, usually in school years (Y2, etc.)	
Type of children involved	2)
Statistical significance of differences between pre- and post-test scores, and between experimental, control/comparison and alternative treatment groups, where known	
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	
Summaries of starting and ending levels and progress	
Follow-up data, if any	

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Notes to Table A.1:

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

	N
randomised control trial (RCT)	17
matched groups quasi-experiment	12
one-group pre-test/post-test study	at least 60

Altogether, at least 91 studies are analysed in this review; the uncertainty is due to the bundling-together of many one-group studies under A.R.R.O.W. ™ (England & Wales), Catch Up® Literacy (national data), and various others. 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 90 or so is higher than in previous editions.

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 (in theory) 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. However, it has been known for interventions which work fine in 'laboratory' conditions (= 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).

Random allocation is not always possible, so researchers often resort to matching groups on known characteristics; such designs are designated 'quasi-experiments'. 'No treatment' groups within quasi-experiments are designated here as 'comparison groups'.

The overwhelming preponderance of one-group studies, despite the increases in the numbers of RCTs and quasi-experiments, means that the profession still needs to raise its game when evaluating interventions.

2) **Type of children:** usually 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.

In Chapters 6 and 7 other descriptions, including 'having dyslexia' or 'with moderate learning difficulties' appear where appropriate to the children or young people studied.

3) **Studies with alternative treatment groups**

Only six of the studies in this edition had AT groups as part of the design. In the case of Paired Reading (section 2.14) and the variant of The Reading Intervention Programme called Reading with Phonology (section 7.8), data from these groups were not analysed. The other 4 studies are listed in Table A.2.

Table A.2: Studies with alternative treatment groups, by method of allocation and whether also had no-treatment group

Section	Scheme	N of AT groups	Method of allocation	No-treatment group?
2.4	Catch Up Literacy (pilot)	1	Matching	Yes
2.12	Inference Training (Brighton)	4	Matching, but some differentiation on comprehension	No
2.12	Inference Training (Glasgow)	2	Matching, but some differentiation on comprehension	No
2.27	The Reading Intervention Programme (original in Cumbria)	2	Random within matched quadruples	Yes

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 the studies covered 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 were used in the studies under consideration, ranging from various editions of the Burt test (first published in 1921; last re-standardised in Scotland in 1974) 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. The 6 writing studies analysed used a variety of forms of assessment, most specially devised – for details, see the separate entries in Chapters 3 and 5 – 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 score points, occasionally both. Raw scores have been used in a few cases, namely Paired Writing (both studies), ECaR in London (writing data), 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

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

**(The definition and formula are 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 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 review 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 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 'Ratio gain: n/a' is stated. For a few exceptions, see Chapter 5 on writing.

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A.2.2 Effect size

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; one of the most frequently cited (and the one used in the 5th edition) is 'Cohen's d'. However, where possible for this 6th edition, data have been re-analysed using 'Hedges g'. As 'Hedges g' is now used by the What Works Clearinghouse in the United States and by the international Campbell Collaboration which registers systematic reviews and meta-analyses in education, and is recommended by the Education Endowment Foundation (2018c), it was felt to be most appropriate for the data sets available from schemes examined here. It is similar to 'Cohen's d' but it uses a pooled variance measure which is more accurate, and conservative, with small sample sizes and when standard deviations differ between groups. The Hedge's *g* statistic is used to measure the effect size for the difference between means. The formula is:

$$g = \frac{\bar{y}_1 - \bar{y}_2}{s_p}$$

with $\bar{y}_1$ denoting the mean of sample 1,

$\bar{y}_2$ denoting the mean of sample 2,

and s_p denoting the pooled standard deviation.

The formula for the pooled standard deviation is:

$$s_p = \sqrt{\frac{(n_1-1)s_1^2+(n_2-1)s_2^2}{(n_1-1)+(n_2-1)}}$$

with s_1 and n_1 denoting the standard deviation and number of observations for sample 1, respectively, and s_2 and n_2 denoting the standard deviation and number of observations for sample 2, respectively.

The Hedge's *g* statistic expresses the difference of the means in units of the pooled standard deviation.

The top line of the formula can be stated in prose as (average gain of treatment group) minus (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 (= well-matched) groups.

A detailed description of how the use of these statistical analyses have evolved during the various editions of 'What Works for Literacy Difficulties' is provided in the 5th edition (pg. 293). The Education Endowment Foundation (2018c) also provides comprehensive guidance on the use of effect sizes in their policy on statistical analysis and effect size calculations.

In some cases in this edition, where authors of articles calculated the effect sizes they report by a different method (e.g. using pre-test s.d's), and where sufficient raw data were made available, they have been replaced by recalculated figures using the above method. In one case (Inference Training in Brighton, section 2.12) no post-test s.d's were given, so no effect sizes are reported. In a few cases where sufficient raw data were unavailable the effect sizes given by the authors are reported.

In several cases effect sizes have been calculated even in the absence of a control/ comparison group. These were all 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 control/comparison group term in the top line of the formula reduces to zero, and the formula simplifies to:

$$\frac{\text{(average gain of treatment group in standardised score points)}}{\text{15 (or other relevant s.d.)}}$$

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: 529) 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 modest; those between 0.50 and 0.80 are medium (useful); and those above 0.80 are large. Large differences are further subdivided 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), 'Effect size: n/a' is stated.

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The two statistical analyses have been summarised and reported using the descriptors as follows:

	Impact			
	modest	useful	substantial	remarkable
Ratio Gain	1-2 ✓	2-3 ✓✓	3-4 ✓✓✓	4 + ✓✓✓✓
Effect size	0.2-0.5 ✓	0.5-0.8 ✓✓	0.8-1.0 ✓✓✓	1 + ✓✓✓✓

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.

Where authors give information on statistical significances it is stated. For quite a few studies the generosity of scheme providers who provided datasets made it possible for significances to be calculated. 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.

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A.3 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 in Tables A.3-15 below. In several Tables of reading data, where measures for both accuracy and 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.2, 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 in Chapter 2, and form part of the basis for the judgements reported. However, it proved impossible to indicate the statistical significance of differences between experimental and alternative treatment groups clearly in Tables A.3-15, and the small amount of such information is therefore provided in Table A.16. In the case of Inference Training (Brighton), the differences include those between the two experimental groups.

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Table A.3: List of reading studies for Primary-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

Study	Year group	Acc	Comp	Follow-up
A.R.R.O.W. ™, Bristol	Y6	32.0	44.0	
Inference Training in Glasgow, exps 1 (poor comprehenders)	Y2-4		28.7	
Inference Training in Brighton, exps 1 (poor comprehenders)	Y3		17.4	
A.R.R.O.W. ™, England & Wales, 2010-15	Y1-6	18.0		
AcceleRead AcceleWrite in Devon	Y5-6	16.1		
A.R.R.O.W. ™, England & Wales, 2007-10	Y1-6	16.0		
Inference Training in Brighton, AT1 (comprehension exercises for less skilled comprehenders)	Y3		13.7	
Inference Training in South-East, exps 1 (poorer comprehenders)	Y3-4		13.6	
Inference Training in Glasgow, exps 2 (good comprehenders)	Y2-4		12.9	
Inference Training in Leicester, 2013-14	Y3-6	7.6	11.0	
Inference Training in Brighton, AT (rapid decoding for skilled comprehenders)	Y3		10.3	
Sound Training, 2010-11	Y5-6	9.4		
Inference Training in Leicester, 2006	Y5-6	6.5	9.0	
Sound Training, 2011-12	Y5-6	8.7		
AcceleRead AcceleWrite in Wiltshire	Y5-6		7.7	
Inference Training in Leicester, 2009-11	Y3-6		7.3	
Sound Reading System	Y2-18+	6.7	7.1	
Inference Training in South-East, exps 2 (better comprehenders)	Y3-4		6.6	
Reciprocal Reading	Y5-6	5.2	6.4	
Inference Training in Brighton, AT3 (rapid decoding for less skilled comprehenders)	Y3		6.0	
Boosting Reading, several LAs	Y4	6.0		
Boosting Reading, several LAs	Y6	6.0		
Inference Training in Brighton, exps 2 (good comprehenders)	Y3		5.9	
Boosting Reading, several LAs	Y1	5.7		
Inference Training in Brighton, AT1 (comprehension exercises for skilled comprehenders)	Y3		5.4	
Boosting Reading, several LAs	Y3	5.2		
Boosting Reading, several LAs	Y5	5.0		
Boosting Reading, several LAs	Y2	4.9		
FFT Wave 3, 2008	Y1-5	4.8		
Reading Recovery in Britain & Ireland, 2004-05	Y1-2	4.7		Maintained up to 6 months

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Study	Year group	Acc	Comp	Follow-up
Paired Reading, experimentals in comparison-group designs	Y1-11	3.4	4.6	Continued to gain for 17+ weeks
Paired Reading, all exps	Y1-11	3.3	4.3	
THRASS in Bridgend	Y6	2.4	4.2	
The Reading Intervention Programme in N. Yorks, 2006/07	Y1-6	4.0		
Reading Recovery in Bristol	Y1-2	4.0		
THRASS in Bridgend	Y5	3.4	3.8	
Read Write Inc. Phonics in Haringey	Y5-6	3.8		
Reciprocal Teaching	Y3-6	2.4	3.7	
Boosting Reading, one LA	Y5	3.6		
Hornet (Highlands 2015)	Y1-9	3.5		
Reading Intervention in N. Yorks, 2009/10	Y1-6	3.5		
Catch Up® Literacy, pilot (exps in matched schools)	Y3	3.4		
Hornet (2019)	Y1-9	3.4		
Reading Intervention in N. Yorks, 2007-09	Y1-6	3.3		
Reading Intervention in N. Yorks, 2005-06	Y1-6	3.2		
Project X CODE	Y2	3.1		
Cued Spelling	Y2-6	2.1	3.1	
Sound Discovery in Norfolk	Y2-5		3.1	
ENABLE ONE-TO-ONE	Y2		3.0	
Switch-on Reading	Y1-6	3.0		
Lexia in York	Y2-6		3.0	
Lexia in Cumbria	Y1-8		2.9	
Boosting Reading, one LA	Y4	2.9		
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. Phonics in Bristol	Y2-6	2.3	2.6	
Lexia in Norfolk	Y2-3		2.6	
Dyslexia Gold *(Fluency Builder)*	Y3-6	2.5		
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 7 yrs still showed benefit
SIDNEY	Y1-2	2.3		
Boosting Reading, one LA	Y1	2.2		
ENABLE PLUS	Y3-5	2.2		
The Reading Intervention Programme, general use in Cumbria	Y2-10	2.0		
Reading Recovery (ECaR in London), BASWRT	Y2	2.0		Maintained up to 12 months

Table A.4: 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 1.0	=	Remarkable impact
Effect size between 0.80 and 1.0	=	Substantial impact
Effect size between 0.50 and 0.80	=	Useful impact
Effect size between 0.20 and 0.50	=	Modest impact

Study	Year Group	Effect Size		Follow-up
		acc	comp	
Reading Recovery, ECaR in London, BAS	Y1	1.67		
Catch Up® Literacy, pilot, exps in matched schools	Y3	1.11		
Easyread, pre-test/post-test 2	Y3-4	0.94		
Paired Reading	Y1-11	0.87	0.77	Gain was maintained up to 17 weeks on
Inference Training in South-East, exps 1 v. comparison	Y3-4		0.85	
Easyread, pre-test/post-test 1	Y3-4	0.68		
The Reading Intervention Programme, orig., exps (reading & phonology), Neale	Y2	0.54	0.77	1 year on, exps still ahead relatively, but all groups making less than standard progress
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 10 months
Sound Check	Y2	0.53		
Inference Training in South-East, exps 2 v. comparison	Y3-4		0.40	
Inference Training in South-East, exps 1 v. exps 2	Y3-4		0.34	

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Table A.5: List of spelling studies for Primary-level in decreasing order of ratio gain

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.

Study	Year Group	RG
A.R.R.O.W. ™, Bristol	Y6	16.0
A.R.R.O.W. ™, England & Wales, both studies	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
Dyslexia Gold *(Spelling Tutor)*	Y4-9	3.5
Cued Spelling	Y2-6	3.1
Hornet	Y1-6	2.9
Switch-on Reading	Y1-6	2.7
The Reading Intervention Programme, 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

Table A.6: List of spelling studies for Primary-level in decreasing order of effect size

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
Effect size between 0.20 and 0.50	=	Modest impact

N.B. None of these studies had follow-up data.

Study	Year Group	Effect size
The CSP Spelling and Language Programme	Y2-4	1.19
Switch-on Reading	Y1-6	0.53
Sound Check	Y2	0.37

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Table A.7: Ratio gains for the only reading study for primary/secondary transition yielding such measures

Key:

RG of 4 or above	=	Remarkable impact
RG between 3 and 4	=	Substantial impact
RG between 2 and 3	=	Useful impact

N.B. This study did not have follow-up data.

Study	Year group	Acc	Comp
Everyone Can Read	Y6-7	13.0	15.8

Table A.8: List of reading studies for primary/secondary transition 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
Effect size between 0.20 and 0.50	=	Modest impact
Effect size below 0.20	=	Questionable impact

N.B. None of these studies had follow-up data.

Study	Year group	Effect size	
		acc	comp
Helen Arkell Y7 Transition Pilot	Y7	0.52 *	
The Accelerated Reader	Y7		0.26
Switch-on Reading	Y7		0.24
Read Write Inc. Fresh Start	Y7		0.19

* Also an effect size for fluency of 0.36

Table A9: List of spelling studies for primary/secondary transition

N.B. Neither of these studies had follow-up data.

Study	Year Group	RG	Effect size
Everyone Can Read	Y6-7	9.9	
Helen Arkell Y7 Transition Pilot	Y7		(0.61)*

**possibly unreliable mainly due to comparison group having lost ground.*

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Table A10: List of writing studies for primary/secondary transition in decreasing order of effect size

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

N.B. Neither of these studies had follow-up data.

Study	Year Group	Effect size
Improving Writing Quality	Y6-7	0.74
Grammar for Writing	Y6	0.24

Table A.11: 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.

Study	Year group	Acc	Comp
Sound Training, large dataset	Y7-9	18.4	
A.R.R.O.W. ™	Y7-9	18.0	
Sound Training, pilot	Y9	8.7	
Read Write Inc. Fresh Start in Cornwall	Y7		8.0
Boosting Reading, 2013-14	Y7-9	7.8	
Rapid Plus	Y7-10	4.6	5.7
THRASS in Bridgend	Y7	4.0	5.7
Thinking Reading, 2007-10	Y7-11	5.6	
Thinking Reading, 2010-13	Y7-11	5.4	
Boosting Reading in Derbyshire	Y8		5.0
Boosting Reading in Derbyshire	Y7		4.1
Word Wasp	Y7-9	3.8	
ENABLE PLUS (KS3)	Y7-9		3.7
That Reading Thing	Y7-13	3.5	
Inference Training in Leicester	Y7-9	3.4	
Catch Up® Literacy in Nottingham	Y8-9		3.3
Easyread	Y7-10	3.0	
The LIT Programme	Y7	2.2	2.6
Catch Up® Literacy in Wales	Y7-9		2.4
Read Write Inc. Fresh Start in Leicester	Y7		2.3
Toe by Toe®	Y8-9		2.0

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Table A.12: 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

N.B. None of these studies had follow-up data.

Study	Year group	Effect size	
		acc	comp
Sound Training, large dataset	Y7-9	0.83	
Sound Training, pilot	Y9	0.68	
Catch Up® Literacy in Nottingham	Y8-9		0.58
The LIT Programme	Y7	0.35	0.46

Table A.13: List of spelling studies for KS3 in decreasing order of ratio gain

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.

Study	Year Group	RG
A.R.R.O.W. ™	Y7-9	12.0
THRASS	Y7	4.0
Dyslexia Gold *(Spelling Tutor)*	Y4-9	3.5
Word Wasp	Y7	2.6

Table A.14: Only writing study for primary and KS3 levels yielding a ratio gain

Key:

RG of 4 or above	=	Remarkable impact
RG between 3 and 4	=	Substantial impact
RG between 2 and 3	=	Useful impact

N.B. This study did not have follow-up data.

Study	Year group	RG
Write Away Together	Y2-6	4.0

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Table A.15: List of writing studies for primary and KS3 levels in decreasing order of effect size

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
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	0.38	
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*

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Table A.16: Comparisons between experimental and alternative treatment (AT) groups at primary level

N.B. There were no other studies with AT groups yielding analysable data.

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, Brighton	- 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
The Reading Intervention Programme (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. Of all the schemes studied here, only five provided any information on re-tests of participating children at some point after the end of the intervention, namely AcceleRead AcceleWrite in Jersey, Catch Up® Literacy, Paired Reading, The Reading Intervention Programme (original in Cumbria), and Reading Recovery (in two studies: ECaR in London and ECaR across Britain and Ireland). For details, see the entries in chapters 2 and 5. This paucity of evidence means that generalisations would be unsound, and none are offered in this edition.

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