

Literacy and numeracy catch up strategies

Introduction and background

This paper reviews catch-up strategies and interventions for low-attaining pupils in literacy or numeracy at the end of key stage 2. Low attainment is defined as attainment below age-related expectations in a particular curriculum subject or skill. The paper includes both interventions which have been trialled with low-attaining year 7 pupils, and those which have been trialled and proved successful with younger or older pupils and which may be transferable to low-attaining year 7 pupils. The paper only includes programmes where independent analysis has provided an assessment of their effectiveness.

The paper explores the effectiveness of these interventions in terms of their effect upon progress made by the pupil over and above what would be expected without them. It also looks at what was involved in running the interventions during the trial, the estimated costs involved if delivered in a similar manner to referenced trials and other considerations for implementation.

The full paper includes a set of broader principles that have been found to help facilitate the transition of pupils from primary to secondary school; these are not included in the summary below.

Literacy interventions

Phonics

- Three phonics-based interventions were analysed in the paper.
- The Fresh Start intervention involves group or one-to-one sessions with pupils, delivered by teachers over a period of up to 33 weeks. This programme has been shown to be moderately effective, although it should be noted that in the efficacy trial schools had put themselves forward, meaning that the sample may not be representative. It is also to be noted that the trial was run over 22 rather than 33 weeks.
- Butterfly phonics involves two one-hour group sessions per week, delivered by trained butterfly practitioners. This programme has been trialled by the Education Endowment Foundation (EEF) and has been shown as moderately effective in terms of progress over the school year. However, small sample sizes in the trial meant that no firm conclusions could be drawn.
- The Rapid programme, involving weekly group sessions delivered by teachers for six weeks at the end of primary school and six weeks at the beginning of secondary school showed no impact upon pupils' progress in an efficacy trial.
- The estimated cost of Butterfly phonics is £108.50 per pupil; the cost of the Rapid programme is £205 per pupil and the cost of the Fresh Start programme is £116 per pupil.

Summer schools and Saturday schools

- Summer schools usually consist of school length days with literacy lessons or workshops, enrichment activities, and time for recreation. Saturday school programmes work in a similar way,
- In general, research by the EEF has shown that summer schools are beneficial to older struggling readers, with a

positive effect on progress. However, less is known about the effectiveness of summer schools as a literacy catch-up.

- Three models of summer school were examined in the paper, namely Future Foundations, Discover Summer School and the SHINE Saturday school programme.
- The Future Foundations involved academic lessons in the mornings followed by enrichment activities in the afternoon. Through an efficacy trial, the programme was found to have a positive low effect upon pupils' progress, although these effects were similar to the normal rate of progress over time.
- The Discover Summer School programme, which consisted of writing and poetry workshops and enrichment activities, resulted in inconclusive findings because the analysis could not rule out other factors being the true cause of effect upon progress.
- The SHINE Saturday School programme, which aimed to revisit areas in which pupils were struggling through enrichment activities, was also found to have a small effect on literacy competency, although the EEF concluded that due to the small scale of the pilot trial the intervention should be considered as showing promise rather than demonstrating a firm impact.
- Summer school programmes are fairly expensive, with costs ranging from £870 to £1,750.
- One of the greatest challenges associated with Summer Schools is achieving high attendance. Those which appear most successful have a strong academic focus.



Oral language interventions

- Oral interventions aim to help pupils with pronunciation, discussion skills and speech.
- An efficacy trial of The Talk for Literacy programme found a significant improvement in children's passage comprehension although no improvement was seen in reading, writing, or speaking abilities. Another intervention, Rhythm for Reading, aims to improve reading ability by asking children to read to a rhythm like stamping or chanting. Research has found a positive, low effect upon pupils' progress through an efficacy trial, although findings were not statistically significant.
- Philosophy for Children is an approach involving participation in group dialogues focused on philosophical issues. This intervention had a low positive effect upon pupils' progress. Findings relate to pupils in years 4, 5 and 6 but are included here as the interventions may be applicable to older struggling pupils as well.
- With oral interventions, the training and development of teachers is of paramount importance, as is the appropriate use of technology to encourage collaboration between students.
- The costs of group oral interventions are relatively inexpensive, ranging from £16 to £56 per pupil.

Reading comprehension and writing interventions

- Reading comprehension interventions aim to help pupils who are low-attaining in literacy with their reading comprehension, ability, and enjoyment. Overall, reading interventions generally have a positive effect on pupils' attitudes towards reading. They also appear to have a moderate positive effect upon general learning.
- There is mixed evidence of the effectiveness of one-to-one reading interventions. The Switch-On reading and Reach programmes both found a moderate positive effect. However, Paired Reading, which paired year 7 pupils with year 9 pupil reading partners; and Text Now, which involved one-to-one sessions with a coach each weekday found no evidence that reading comprehension or attitudes towards reading improved at all.
- Computer-based interventions which involved reading eBooks and eTextbooks to promote text comprehension through quizzes and games have been found to be effective. For example, RM Books, an intervention using eBooks and eTextbooks to improve reading skills, found a high positive effect on both reading enjoyment and frequency of independent reading. Accelerated Reader, another ICT-based programme was found to have a moderate positive effect.
- Computer-based interventions are relatively inexpensive, for example Accelerated Reader worked out at £9 per pupil, whereas most one-to-one interventions are more expensive at up to £62 per pupil.
- Reading comprehension interventions are likely to work best when used in combination with other approaches. It is also important for teachers to assess pupils' needs prior to implementation as it appears less effective when pupils lack particular phonics or vocabulary skills.
- The paper looked at 2 key writing interventions. Grammar for writing encourages pupils to improve how their writing communicates with the reader by making connections between a linguistic feature and the effect it has on the piece of writing. It was found to have a low positive effect. Improving Writing Quality involves pupils writing about trips on which they have been taken. The writing is supported by Self-Regulated Strategy Development which helps pupils plan, monitor and evaluate their writing. This programme was found to have a high positive effect.

- The writing interventions are inexpensive, with Grammar for Writing costing £20 a pupil and Improving Writing quality costing £60 per teacher.
- With writing interventions, the size of the group appears to be an important consideration, with more progress being made in smaller groups.

Blended literacy interventions

- Blended interventions are programmes which combine multiple approaches into a coherent package (e.g. phonics and writing).
- Several blended programmes were evaluated as having no impact on pupils' literacy progress. However, there were 2 programmes which appeared promising.
- The Perry Beeches Coaching Programme is a one-to-one intervention that provides pupils with a coach who supports both their reading and writing. The intervention showed strong evidence of promise through an efficacy trial with a moderate positive effect upon progress for pupils who took part in the programme. The Reach Language Comprehension intervention involves meta-cognition, reading comprehension, making inferences from text, writing stories and vocabulary training. It was found to have high effectiveness through an efficacy trial, although researchers did raise some concerns about the robustness of the methods.
- There is wide variation in the costs of these methods, with the Perry Beeches programme costing £1,400 and the reach Programme costing £486 per teaching assistant.

Numeracy interventions

- There is limited evidence of the effectiveness of numeracy catch-up interventions specifically for low-attaining year 7 pupils, or those about to enter year 7. Two interventions have been explored.
- The Future Foundations summer school was found not to be effective at helping pupils make progress with numeracy. The other intervention studied was the Tutor Trust programme which uses university students and recent graduates to provide maths and English tuition to pupils in year 6 and 7. Research assessing the effectiveness of this intervention was not sufficiently robust to draw firm conclusions, although it did appear to have a small negative effect on pupil progress.
- There are two interventions which have been trialled with younger children and which may be applicable to year 7 pupils. One of these is Catch-Up Numeracy; a one-to-one intervention consisting of two 15-minute sessions per week that are delivered by teaching assistants. The other is Every Child Counts, which provides lessons with specially trained teachers to improve pupils' numeracy attainment.
- Interventions which focus on cognitively challenging talk, such as Philosophy for Children have led to an improvement in numeracy progress. Trials of this programme have been carried out with younger children but may also be transferable to pupils in year 7.
- Numeracy interventions range in cost, from a summer school programme such as the Future Foundations summer school at £1370 per pupil, to the Philosophy for Children programme which is £16 per pupil.
- There are a number of numeracy strategies which have been found to be effective with lower attainers at primary school. These include: early intervention to reduce 'maths anxiety'; individualised interventions which focus on the specific elements which the child is finding difficult; and co-operative work and group collaboration.

The full document can be downloaded from:

<https://www.gov.uk/government/publications/literacy-and-numeracy-catch-up-strategies>