Implementing reading interventions to support disadvantaged children in England: insights from a process evaluation.

Abstract

In this paper we present insights from the qualitative data collected during a process evaluation of a reading intervention project carried out in primary and secondary schools in West Yorkshire, England.

Commercially available reading interventions, financed by the Strategic School Improvement Fund, were delivered by school staff to disadvantaged pupils over a period of four half-terms, and a team of university-based researchers carried out qualitative interviews with members of school staff in order to discover factors that affect the sustainability of school-based reading interventions after the initial funding period, and identify good practice in planning for and meeting sustainability objectives. The data from the interviews enabled the researchers to compare and contrast the experiences of the staff following the different interventions.

The findings presented in this paper have generated some helpful guidance about the process of implementing reading interventions in schools successfully, and factors such as staff training, fidelity of implementation and organisational context are discussed.

Keywords

reading interventions sustainability disadvantaged pupils staff perceptions process implementation

Introduction

The attainment gap between children from economically disadvantaged backgrounds and those from more affluent backgrounds is well documented. The gap is evident when children begin school at age 5 and grows bigger at every stage of education afterwards (Crenna-Jennings 2018). In England, pupils who have been eligible for Free School Meals for at least 80 per cent of their time in school, an indicator that they have lived for a long time in a household with little or no employment income, are those who are most persistently disadvantaged (Hutchinson *et al*.2019). In their analysis of data available for the years 2011-2019, Hutchinson *et al*. (2019) discovered that the attainment gap, measured in months of progress, was beginning to narrow during the primary phase, but data measured during 2017 – 2018 demonstrated that in the secondary phase the gap had widened again by up to 18.1 months, based on attainment in English language and maths at Key Stage 4.

The gap in reading ability between children from the financially poorest households and others has been recognised as a 'crucial contributing factor towards the persistent educational divide' (Lawton and Warren 2015: iv). Poor reading skills are part of the cause of the underperformance of thousands of children from low-income families. Reading is considered to be the most fundamental skill that pupils need in order to access the curriculum and to achieve their potential (Warren & Paxton 2014); without being able to read fluently, pupils may lack confidence as they enter secondary school, which in turn could lead to embarrassment, humiliation and eventual disengagement from the curriculum. The inability to read well can also have far-reaching effects into

adult life for a significant number of children; low literacy affects individuals' health and employment prospects, and is a risk factor associated with criminal activity (Clark 2014 and Morrisroe 2014). Ordinary classroom teaching, or 'no treatment' does not provide the extra help that enables children with literacy difficulties to catch up; what is necessary is a coordinated approach delivered by appropriately trained staff (Brooks 2016: 14).

Problems such as poor literacy and reading skills are tackled using a wide variety of commercially available interventions, and there is a well-recognised need for more research to observe how, in what areas and to what effect, particular interventions are being used in order to gain a greater understanding of what happens when research is translated into practice. Process evaluation is an essential part of that exercise, and will provide rich data on implementation and context that is important in assisting decision makers when considering which of the many available interventions to adopt in their setting.

Background: the reading intervention project in West Yorkshire

In 2017 the UK Government introduced *The Strategic School Improvement Fund* (SSIF), a grant designed to support a broad range of school improvement activities in maintained nursery schools, schools, academies, alternative provision, special academies, post 16 academies and pupil referral units. The initiative intended to support medium to long term, sustainable activities across groups of schools, with school-led provisions being the preferred recipient of funds. Funds were to be granted to the schools most in need, with the aim of improving school performance and pupil outcomes (DfE 2017). Over £56 million was awarded to a total of 171 projects, providing support to just over 3,100 individual schools of all types across the country. In shaping their application, teaching schools, multi-academy trusts and local authorities worked with sub-regional improvement boards to address local improvement priorities across groups of schools.

The project reported on in this paper, 'Narrowing the Gap in Reading Attainment for Disadvantaged Pupils' was one of the recipients of the SSIF and arose from a concern for identified regional priorities: literacy development at all key stages; disadvantaged learners' attainment and progress in English, and the local priority of raising achievement in reading.

The aim of the project was to use and evaluate commercially available reading interventions to improve the reading achievement of disadvantaged pupils, using New Group Reading Test (NGRT) as the preferred diagnostic tool. Disadvantaged pupils were defined as those:

- Known to be eligible for free school meals at any time in the previous 6 years
- Looked after for at least one day during the academic year
- Ceased to be looked after because of adoption or order.

The seven-month project ran across 22 schools and involved 535 intervention students. All of the targeted primary schools involved in the project had reading progress scores below the national average, and all key measures in the secondary schools were significantly below the national average.

Following Brooks' (2016) review of the UK quantitative data available for catch-up intervention schemes for improving reading and/or spelling, a number of reading interventions were considered by the Steering Group (which consisted of representatives from the local council and leaders of four school teaching alliances) and a choice of intervention, reviewed and approved by a local research

school, was offered to schools. Senior teachers selected the one they felt was most appropriate for their pupils and school (Brooks 2016: 10), and confirmed that subsequent monitoring and evaluation of the interventions would be manageable within the confines of the project.

The Head teacher and/or a member of the Senior Leadership Team had overall responsibility for running the project in school. Each school had a 'Reading Champion' (RC) who managed the practicalities of the intervention in the school, attended the intervention training and network meetings, and sometimes delivered the intervention. In order to ensure sustainability, it was intended that the Reading Champion would become the intervention expert in school, able to identify and implement appropriate strategies in the long term. In some schools, additional teachers, teaching assistants or school governors were also involved with both the initial training and delivering the intervention.

Interventions were funded between September 2018 and March 2019. Training for school staff in how to deliver their chosen intervention occurred towards the end of the previous summer term, 2018. All school leaders involved were asked if they would participate in the qualitative process evaluation reported on here and from those that offered, eight schools were selected comprising of two schools out of each of the intervention programmes.

The interventions

The Education Endowment Foundation Attainment Gap report (EEF 2018:16) found that targeted small group and one-to-one interventions have the potential for the largest immediate impact on improving pupils' attainment, and that when properly trained and supported, teaching assistants working in structured ways with small groups can boost pupils' progress. The EEF also highlight that building communities of practice through sharing effective practice and mechanisms between schools is key to closing the attainment gap. These factors were critical in shaping the design of the reading intervention project. All the literacy programmes used in the project claim to be supported by evidence, however the quality and quantity of that evidence varies between interventions.

The interventions considered in this paper are:

- Accelerated Reader (AR)
- Catch Up® Literacy (CUL)
- Fresh Start (FS)
- Lexonik (L)

Accelerated Reader (AR)

Accelerated Reader is one of a suite of educational products produced and marketed by the American company, Renaissance (www.renaissance.com) and has been active in the UK since 1999 as Renaissance Learning UK, also known as RenLearn (www.renlearn.co.uk). Renaissance educational products use phased pupil-tests to generate and display detailed, student-specific analytics so that

teachers can track differentiated pupil progress easily. Technology and analytics to track progress with the aim of accelerating learning are key features of Renaissance products, in which the company offers teachers on-going training and support (www.renaissance.com). AR is a reading scheme that aims to develop pupils' independent reading. Pupils begin with AR's bespoke STAR (Standardised Test for Assessment of Reading) test to determine their Zone of Proximal Development (ZPD). This directs pupils to reading books with the correct level of challenge to engage them, but not to deter them by being too difficult for their reading capability. After reading a book, pupils complete an on-line STAR reading assessment, described to them as a quiz, to test their comprehension. Feedback to pupils is immediate, which, Renaissance suggests, motivates them to self-monitor and progress in their reading, and opens opportunities for pupils to discuss their reading with parents, peers and teachers (www.renlearn.co.uk). AR does not teach children; their test scores need to be analysed carefully by a teacher to make a difference to their progress.

AR has undergone considerable, independent academic scrutiny. Numerous quantitative and qualitative research studies, predominantly in Europe and USA, have tested the efficacy of AR and the veracity of its claims to accelerate learning, however, the What Works Clearinghouse in the USA reviewed 11 studies of AR and found that only two of them met their standards for review (2016). More critical findings suggest pupils are motivated by rewards associated with positive test-scores and that this undermines children developing an intrinsic love of learning (Persinger 2001 in Thompson *et al*., 2008). Others, such as Biggers (2001), Brisco (2003) (both in Thompson *et al.*, 2008) and Siddiqui *et al*. (2016) question the correlation of STAR tests with pupil progress, and query whether improvement is more likely to be the outcome of better reading books and more time to read. Schmidt (2008) raises concerns that AR limits pupils' reading choices and that the culture of testing holds back social learning

Context

Overall, eight schools and a total of 148 pupils were enrolled on the AR intervention. The Accelerated Reader case study took place in two primary schools, numbers four and five on Table 1, below. In each school the reading champion had responsibility for setting up and delivering the intervention, which meant they had intimate knowledge of the process in their school and could provide rich, close up qualitative data about it. The reading champion was a primary classroom teacher in one school and a teaching assistant in the other. The senior leaders involved in the intervention were a Head Teacher in one school, and a Deputy Head in the other school.

Summary

The qualitative interview data from both case study schools produced similar results. At both schools the senior leaders and the reading champions were full of praise for AR. They reported on noticing tangible benefits arising from the intervention in terms of pupil progress, improved engagement in reading and improvement in pupil behaviour. The quantitative data drawn from AR's monitoring metrics, internal school metrics and anecdotal evidence from classroom teachers in the case study schools revealed that the intervention pupils had made progress towards meeting age-related expectations in reading, but this was not always the case across all the schools in the project. Less certain is whether the benefits noticed by the case study schools arose specifically from the AR intervention, or more generally from time and resources being targeted towards pupils' reading. The reality lies probably somewhere in-between. Both schools have decided to continue with AR after the end of the funded project and to widen the cohort of pupils involved.

Catch Up® Literacy (CUL)

Catch Up® Literacy was developed through a strong research and theoretical approach as outlined by Clipson-Boyles (2000), and has been refined for the age range of 6 to 14. Designed to support pupils both with reading and comprehension skills, the framework teaches a range of skills, strategies and concepts, including phonological knowledge (visual and aural), sight recognition of high frequency words, cueing strategies, and the links between reading and writing (Clipson-Boyles 2000:79). The book-based intervention takes a one-to-one approach where teaching assistants, teachers or mentors work individually with a pupil.

The intervention requires a 15-minute individual session to be delivered twice a week, in the form of personalised learning where initial assessments identify the nature of the learning required by each pupil. It teaches pupils to blend phonemes (combine letter sounds into words), segment phonemes (separate words into letter sounds), and memorise particular words so they can be understood without needing to use phonics strategies to decode them (EEF 2015). Following the initial assessment, pupils are guided towards books that are appropriate for their reading ability. The books are also read by the teacher working with the pupil. During the 15 minutes there are reading and writing tasks to enable the pupils to consolidate their own reading and comprehension skills, using a prescribed schedule.

The training package for the teaching assistants is usually three half days and this is required to run the intervention. It is not allowed for schools to cascade the intervention beyond the trained teacher as it has been found that the interventions are less effective if delivered by people who have not attended the training.

The Catch Up® Literacy website states the intervention has been proven to significantly improve the achievement of learners who find literacy difficult (https://www.catchup.org/interventions/literacy.php) however a study by the EEF in 2019 found '…no evidence that Catch Up® Literacy had an impact on pupils' reading comprehension outcomes when compared to 'business as usual' teaching assistant support' (EEF 2019).

Context

Overall, four schools and a total of 50 pupils were enrolled on the CUL intervention, but only three schools submitted NGRT data at the end of the project. The Catch Up® Literacy case study took place in two primary schools, numbers ten and 11 on Table 1, below. The reading champions were both classroom teachers who had responsibility for and managed the intervention. One came late to the project. Teaching assistants and a school governor carried out the one to one reading with pupils. Initially pupils were targeted in each school in year 6, however one school subsequently included pupils in other year groups.

Summary

Qualitative data revealed that Catch Up® Literacy was felt to be a useful intervention to have in both case study schools. It was found by all involved to be straight forward to use and although the initial training at the end of term just before the school broke up was noted as an issue in timing, the support materials and online support enabled the schools to use this intervention quickly and confidently. In line with the EEF report (2015) the schools were confident that there was a significant improvement in pupils' attitudes to school, self-assessed ability in reading, and their confidence in and enjoyment of writing. It was also clear that all staff involved enjoyed increased confidence and

knowledge of literacy support. The legacy from the involvement with the intervention includes resources and teacher knowledge. However, it was felt the financial cost was high compared to the number of pupils that had benefitted and the levels of progress they made. Quantitative data showed that progress towards meeting age related expectations was variable. There was an increase in some pupils' reading ages but some had reduced scores by the end of the intervention, with both schools showing mixed outcomes from online NGRT. Aspects of the intervention will be embedded in practice next year but not as a Catch Up® Literacy intervention. Doubts about whether the intervention enabled the pupils to make progress were summed up by one Reading Champion:

> *I think it's been important and it's been really valuable for school for us to be able to have the time and the funding to deliver it. However, I think if we'd have been given a box of books and the funding for somebody to sit with those children, it would have had a very similar impact.*
>
> (CUL Reading Champion)

Fresh Start (FS)

Fresh Start is a reading, spelling and writing intervention designed to be used with pupils aged 9-13 who are below age-related expectations in reading. It is based on a systematic synthetic phonics approach and comes from the same company which makes Read Write Inc., a popular and widely-used phonics programme published by OUP (Walker, Sainsbury, Worth, Bamforth and Betts 2015), which has been championed by both Ofsted and the UK Government (Ofsted, 2010; DfE, 2015). The programme is made up of 33 modules with all pupils starting at the introductory module, designed to test their current level of phonic knowledge and determine the best starting point for them on the course. Pupils are then placed into small groups (two to eight pupils) with others at a similar level to themselves. This creation of homogenous groups following initial assessment is deemed to be an important principle of the programme (Gorard, Siddiqui and See 2016) as after the initial assessment module, each group of pupils commences the programme proper at the module best matching their prior learning.

The intervention places a strong emphasis on teaching grapheme-phoneme (letter-sound) correspondences (GPCs) in a systematic way, teaching pupils to blend these to read, and to segment spoken words into sounds in order to spell. Writing is thus taught alongside reading, and as pupils progress through the programme, they will both read and write more substantial texts. There is also a strong focus on reading for meaning and on vocabulary development, with each session focussed around a specific text. The materials can only be purchased with training (not separately), as this is deemed to be crucial to the success of the programme (Gorard, Siddiqui and See, 2015).

An EEF-supported evaluation trial of the Fresh Start programme found that it showed 'considerable promise as an effective catch-up intervention for low-attaining readers at the transition phase from primary to secondary school.' (Gorard *et al.*: 2015), however it should be noted that this finding was queried by Brooks (2016) who suggested that the effect size had been miscalculated, and the original EEF team also questioned the schools' use of randomisation (Gorard, Siddiqui and See, 2016).

Context

Overall, The Fresh Start intervention was adopted by four schools and a total of 51 pupils enrolled on the intervention. The case study was conducted in a primary school (School 15) with a group of

disadvantaged Year 6 pupils, and the other a large middle school (School 12) where pupils in both Year 6 and Year 7 took part. Head teachers were responsible for the overall intervention and reading champions for the management of it. The intervention was carried out by reading champions, teachers and teaching assistants.

Summary

The qualitative interviews revealed that Head teachers, reading champions and the teachers and teaching assistants delivering the intervention all believed that there had been a significant and worthwhile effect on the participating pupils. The quantitative data in the case study schools demonstrated progress towards meeting age related expectations of an average of two years and five months. However, schools acknowledged that progress did depend on the measure being used, with one school pointing out that NGRT, single word reading tests, the intervention's own assessment measure and SATs tests all measured different aspects. Both schools indicated they would like to continue with the intervention in the future.

Lexonik

Lexonik is a reading programme which was initially developed in response to the needs of underachieving secondary school pupils in Middlesbrough, England in 1999, and developed into the reading programme known as 'Sound Training'.

The resources for 'Sound Training' were further developed into Lexonik in 2017 but to date the efficacy of this intervention is yet to undergo robust, academic scrutiny. Data analysis of the reading ages of a range of 2,135 pupils with reading ages of 9 years and above who undertook 'Sound Training' in 2014 was carried out by Northumbria University and showed that regardless of their reading age at the start of the programme, most pupils made progress (https://www.lexonik.co.uk/library/impact/), however this study has not been peer reviewed.

Training in how to use the programme is delivered to teachers by Lexonik staff in a very specific, highly structured and prescriptive way. The training sessions are described as 'intensive'. Teachers who have been trained by Lexonik are granted a 'licence' to deliver the programme, and their delivery is checked again by Lexonik staff a few months after receiving the initial training, with the aim of ensuring that teachers are maintaining fidelity to the programme. There are also web resources available that enable teachers to access further support in the explicit teaching of subject and cross curricular vocabulary as well as spelling, punctuation and grammar rules, should they be required. Lexonik supplies schools with a single word reading test to assess each pupil before and after participation in the programme, providing a measure of impact for each pupil, and provides all the necessary resources. The teaching sessions, which must be delivered by trained teachers to groups of the same four pupils in hour long sessions over the course of six weeks, have a focus on phonology, reading fluency and etymology. The website explains that activities and procedures are constantly repeated until automaticity with syllable recognition is achieved; activities are always timed and pupils have to 'beat the clock'. This enables them to move the decoding process out of the working memory and frees up cognitive space so that reading comprehension can take place (https://www.lexonik.co.uk/about/). It is important to note that Lexonik is designed for children who are already working at a fairly high level and it may not be suitable for pupils who are new to English or have a SEND. For these pupils 'Lexonik Leap' might be a better intervention.

Context

Overall six schools and 293 pupils enrolled on the Lexonik intervention. The case study took place within one primary (School 21) and one secondary school (School 19). Within the primary school setting, the Head Teacher was the reading champion, and three teaching and higher-level teaching assistants delivered the intervention. In the secondary school, the intervention was delivered to 22 Year 11 pupils. The reading champion was a member of the Senior Leadership Team, and the intervention staff was a cover supervisor. This member of staff left the school part way through the research project so was not available for the second interview. The SENDCo has since been trained by Lexonik and is now delivering Lexonik Leap to pupils in Year 7.

Summary

Within both case study settings, the Lexonik reading intervention has been considered to have had a positive effect on reading progress and general attitudes towards reading. Both schools have now bought Lexonik Leap for their lower years and the secondary school are rolling it out to their Year 7. All members of staff interviewed were enthusiastic about the intervention, not least because the interactive and competitive activities meant that even recalcitrant year 11s engaged with the programme and were subsequently assessed to have made gains in their reading abilities. There was anecdotal evidence to suggest that pupils' confidence in attempting to read unfamiliar words outside of the intervention had also increased. The quantitative data revealed that progress towards meeting age related expectations in the primary school was an average of three years and eight months, and in the secondary school 12 pupils made expected or higher than expected progress, and two made lower than expected progress, although this was largely due to poor attendance.

The secondary school reading champion thought that perhaps Standard Age Scores might be a better indicator of progress than the Wide Range Achievement Test supplied by Lexonik, and in the primary school the reading champion acknowledged that the reading age element does not assess comprehension skills.

The process evaluation: a qualitative approach

The evaluation was developed by university staff after the West Yorkshire Project had already started, and was itself a developmental process, evolving as the project progressed. Although quantitative outcomes, such as changes to the pupils' reading data were recorded, the evaluation focused more on the process than the outcome, and this is the main focus of this paper.

A team of four university-based researchers used two structured qualitative interviews to collate the reflections of the staff involved in the interventions in order to evaluate their experience of the training and delivery of the intervention activities, and to identify intervention specific, leadership, financial and organisational factors affecting impact and sustainability. This approach was supported by the EEF guidance for implementation and process evaluation, (Humphrey *et al.,* 2016) which outlines the need to consider factors that are believed to affect implementation of interventions, such as preplanning and foundations, the implementation support system, the implementation environment, implementer factors and the implementation characteristics.

Interview questions were devised by the research team to enable the process to be explored at the mid-stage of the project, the first set of interviews taking place during February 2019, approximately halfway through the allocated time frame for the intervention. Staff responsible for delivering the intervention in each of the eight schools were interviewed by members of the university research

team using structured interviews to ensure a consistent approach, each concentrating on one intervention. An open-ended question at end of each interview captured any additional information that participants felt was important to share with the researcher. Interviews were voice recorded and individually transcribed before analysis. BERA Ethical Guidelines (2018) were followed and all schools and participants remain anonymous.

Analysis of the transcripts was carried out using a deductive content analysis approach. To avoid researcher subjectivity, the research team agreed a framework for line-by-line analysis of the transcripts. This analysis provided the first insights into the implementers' experiences of the practicalities of delivering the four reading interventions.

The collective findings from the first set of interviews were used by the research team to generate a range of follow up interview questions. Participants were re-interviewed in June 2019, at the end of the funded period of the intervention focus. This second interview round included the head teacher or a member of the senior leadership team, the reading champion who oversaw the intervention within the school and the staff member delivering the intervention with the pupils (where this was not the reading champion). Interviewing members of SLT was an important component of the process evaluation, but its organisation proved problematic in some schools due to staff availability.

The purpose of these second-round interviews was to:

- triangulate some of the initial observations from the staff,
- confirm that some of the initial thoughts and views remained relevant towards the end of the intervention,
- explore issues that had arisen from the first interviews,
- discover the participants' views following some time to reflect on the completion of the intervention.

The interviews were again voice recorded and transcribed, before being analysed deductively around the agreed framework. Each researcher wrote a case study about their focussed intervention, providing insights into the experiences staff in two schools had of implementing their intervention (Price *et al*., 2020).

This process provided structured data from the interviews which enabled the researchers to compare and contrast the experiences and perceptions of the staff following the different interventions. In addition to the data from the interviews, secondary data in the form of the quality assurance reports, intervention support lead reports and the final data analysis were available from the teaching alliance project team to cross check and clarify where needed. Schools differed in size and age groups (some secondary and some primary) and pupil starting points, so the qualitative results of the interventions cannot be compared, and discussions about implementation cannot be generalised but will provide some guidance to other schools considering implementing reading interventions.

The processes involved in implementing the West Yorkshire reading intervention project in schools

Intervention specific training, support and resources.

Training was different across the four interventions. Intervention staff found it very straight forward to learn how to use Fresh Start and Catch Up® Literacy. Concerns were raised about the timing of the training sessions for Catch Up® Literacy and Lexonik, which were held just before the six-week summer holiday, and as a result staff trained by Lexonik practised on their own children during the summer holiday. It seems better practice would be for staff to be able to practise and use the interventions in school sooner after training has occurred. Training for Accelerated Reader was more challenging and it took time for the staff to be able to use it competently. In October 2018 Lexonik trained staff were observed delivering the intervention and assessed and awarded a non-portable licence by Lexonik trainers, which lead to a greater understanding of how to use and deliver the intervention in line with Lexonik stated expectations. Once the interventions were active in schools, all staff commented on how all the intervention providers delivered good support for staff, such as helplines and resources for use with pupils.

With the exception of Accelerated Reader, the interventions were adult-led and remained so throughout their delivery. Accelerated Reader moved many pupils quickly from being adult-led to becoming autonomous in managing their reading and progress.

The time commitment required for each intervention differed with one hour per week for Lexonik; two 15-minute sessions per week for Catch Up® Literacy, and four one-hour slots per week for Fresh Start. The Accelerated Reader programme was embedded within the whole curriculum and half an hour of reading time was allocated each day.

The role of the Reading Champion and staff delivering the intervention

The Reading Champion was to become the expert in the intervention, administering and carrying out or overseeing the delivery of the interventions within school. In some schools the RCs were TAs, and in others they were members of SLT. In one secondary school the RC was a cover supervisor who left the role partway through the intervention programme. The role was taken on by the SENDCo who recognised the importance of the role in maintaining a focus on improving reading across the school. The main factors that came through from interviews with SLT were the importance of the RC in driving the intervention and the enthusiasm, commitment and interest from the staff delivering the interventions.

Organisational factors, timetabling and rooming.

The differences in settings and organisational contexts meant that schools took different approaches to embedding the interventions. One Accelerated Reader school took a whole curriculum approach with whole school reading time so pupils enrolled on the intervention were part of the wider school activity. They gave pupils a level of ownership over setting up the intervention, for example by giving them responsibility for organising and shelving the reading books.

Deciding on the best time to timetable the intervention was a key challenge for all schools. Primary schools had a bit more flexibility than secondary, and afternoons rather than mornings were often used for the intervention activities because morning classes of literacy and numeracy were said to be too important for pupils to miss. However, taking pupils out of subjects for the one-to-one time (Catch Up® Literacy) or group activities (Fresh Start and Lexonik) meant they missed afternoon

lessons they enjoyed, such as Art and Science. Trying to vary the lessons missed proved very difficult. Lexonik activities last one hour, the same duration as a lesson, which made timetabling problematic and Year 11 pupils missed 6 hours of GCSE lessons. Withdrawing pupils from classes also meant that schools had to work closely with parents to ensure they understood what was happening and why their children were being withdrawn for the interventions. Ensuring key staff were available was also difficult. Some had timetabled time, whilst other schools utilised governors and paid for additional teaching assistant time.

Catch Up® Literacy was planned for year 6 but one school felt this was too late, and that using the intervention earlier would have been better. Another school which had pupils from several year groups felt it was more appropriate at lower key stage 2. The RC in the secondary school using Lexonik felt year 9 would be a good fit, but that year 11 was rather late.

Implementation fidelity

Implementation fidelity is discussed frequently in published literature about the process of implementing catch-up literacy interventions in schools (see for example Vaughn *et al*. 2012) and is typically defined as 'the degree to which teachers and other programme providers implement programmes as intended by the programme (Dusenbury *et al*. 2003: 240). Whilst it is accepted that 'complex interventions typically undergo some tailoring when implemented in different contexts' (Moore *et al.*, 2015), Troyer (2017) views implementation fidelity as an essential consideration and suggests that variations in implementation fidelity can go some way to explaining why 'carefully designed, research-based interventions have so little effect on … reading skills' (Troyer 2017: 21). She argues that relationships between implementation fidelity and student outcomes are rarely explored and teacher-level variations across aspects of fidelity are seldom considered in published research (2017: 22). Lendrun and Humphrey (2012) discuss the difficulty of schools striving for fidelity but wanting to adapt interventions due to their knowledge of the context in which they will be carried out; interviews with key staff revealed this was also the case in the current study, although echoing Troyer's findings, at the time of inception this process evaluation was not designed to explore implementation fidelity and its relationships with pupil outcomes specifically.

It has been argued that in order to implement a catch-up intervention successfully, teachers need to understand the theory and deep principles behind it (Penuel, Phillips, & Harris 2014) and have prior knowledge of the reading process to inform instructional decisions (Troyer 2017: 30). Whilst it is acknowledged that TAs can be very effective if given appropriate training and support (EEF briefing 2016), in order to maximise their impact, they need to be able to give feedback to class teachers effectively and regularly (Brooks 2016: 15). Without these conditions in place fidelity to the programmes may drift. Although the qualitative interviews demonstrate that on the whole participants in the present study *believed* that they had maintained fidelity to the programmes, subsequent comments revealed that this was not always the case. Most common variations reported included delivering fewer than the recommended sessions, altering the time spent on sessions or not following the routine exactly.

Staff delivering Lexonik indicated that fidelity was high due to the initial training and follow up assessment, the award of a licence and the follow up support. Staff using Accelerated Reader also indicated there was a high fidelity in how they used the intervention. Staff using Fresh Start reported high fidelity but also discussed ways in which they adapted the programme. Staff using Catch Up® Literacy reported that they adapted the intervention in several ways, including the books selected

and the emphasis given during the reading sessions. These adaptations may be linked to the mixed pupil outcomes reported, supporting Dulak & DuPre's (2008) finding that higher levels of fidelity to an intervention results in effect sizes that are typically two or three times larger than those with low levels of fidelity. As Lendrum and Humphrey (2012) discuss, fidelity in interventions is important but often not adhered to. This variation in implementation fidelity mirrors the findings from the EEF report (2019) and other studies (e.g. Gorard, Siddiqui, & See, 2015; See *et al*., 2015). Discussing the issue of fidelity in the implementation of interventions, Moore *et al.* (2015) note that the local context is central to intervention implementation and rather than view fidelity of implementation as a fixed quality it is often better to consider it as a matter of degree. Additionally, as Koutsouris, Norwich & Bessudnov (2019) suggest, this fidelity drift may indicate that although time was devoted to preparing for the practical and organisational aspects of the interventions, there was less consideration given to the importance of understanding the pedagogy underpinning the interventions.

Leadership involvement and support

The reading champions were responsible for the day to day administration and monitoring of the interventions in the schools. For most schools the senior management team made the higher-level decisions but were well aware of the effect the intervention had both on their staffing and the pupils. Governing bodies were also mentioned during staff interviews; in two schools, governors were trained and delivered the interventions in school. Teaching staff felt this high level of commitment to the intervention from senior leaders and governors was important because it endorsed their hard work and achievements. The level of support and understanding of the intervention at the most senior level within the school was felt to effect the ability of staff to raise the profile of the intervention within school and overcome obstacles.

Reading attainment and pupil attitudes

The analysis of pupil data related to progress and outcomes from the reading interventions was developed and carried out by the school alliance project team. The different interventions focussed on developing different aspects of literacy, which makes it hard to compare quantitative outcomes in a meaningful way, and the context of the school, the pupils, the staff and the area also means that comparisons between settings may not be reliable. Data is included here merely for information.

Table 1. Number of disadvantaged pupils involved in each intervention by school and mean NGRT standard age score difference in months from beginning to end of intervention period, where data were returned.

School	School phase	AR	CUL	FS	L	Mean age difference in months
1	P	14				-2
2	S	32				-1
3	T	21				2
4	P	12				3
5	P	33				2

6	J	18				4
7	P	6				5
8	P	12				7
9	P		12			-2
10	P		20			8
11	P		7			9
12	M			15		2
13	P			11		No data
14	P			20		6
15	P			5		9
16	M				26	3
17	P				127	2
18	P				51	2
19	H				22	4
20	P				20	4
21	P				47	17

Notes: AR, Accelerated Reader; CUL, Catch Up® Literacy; FS, Fresh Start; L, Lexonik; P, Primary; S, Secondary; T, Through; J, Junior; M, Middle, H, High.

Staff enthusiasm and commitment to the interventions was encouraged in individual schools through evidence of tangible results. Schools that had used Fresh Start were able to demonstrate that pupils had improved reading ages and SATs scores as measured by the NGRT data (a test of reading ability that provides an overall reading age and compares students' decoding skills to their understanding of what they have read). The schools using Lexonik reported considerable progress for all but one pupil who was of very low ability. Schools using AR and Catch Up® Literacy had more mixed outcomes, with the data showing some pupils regressing, although the research participants did feel that the assessment mechanism was not robust for some pupils.

Although the reading data across the project showed variable improvements in pupil outcomes, the qualitative data gained for the process evaluation gave consistent indications of very positive responses from pupils receiving all interventions. All of the schools reported an overall improvement in pupils' attitudes towards reading. Intervention pupils were said to be enthusiastic, enjoyed reading, were more willing to try and overcome the challenges of reading and were engaged with a greater range of texts:

> *Because I actually enjoyed it and like that's how, because usually I didn't really like reading that much but now it's like made me want to like read more because for my birthday, I got a set of books.* (CUL Pupil)

All teaching staff referred to the progress that pupils had made in other areas of their development, such as increased confidence, self-image, self-esteem and better general behaviour, and there were noticeable benefits across the wider curriculum as pupils' reading confidence improved. There were also social benefits, as noted particularly with the participants using Fresh Start, where the small reading group formed a mutually supportive community within the class:

> *It's been a very small group and the relationships and trust that they've built between them, you know, it goes wider than a reading project…you have to look at the social aspect of them coming together and reading and trusting each other and supporting each other and*

encouraging…it goes much wider than just the progress and attainment. (FS Reading Champion)

In sum, many of the pupils selected to take part in the interventions have made some progress towards meeting age related expectations in reading, and many pupils have experienced a positive impact on other aspects of their own personal development.

Finance

The interventions were funded by the SSIF project which enabled schools to buy into them and, where necessary, procure resources needed to facilitate them. The intervention costs were different and therefore it is not possible to make direct comparisons.

Senior teachers were asked to reflect on whether they would continue with their intervention after the end of the funded project: Schools using Catch Up® Literacy said there were elements of the intervention that they might use to support pupils but that on the whole it had not been value for money, the main expense being the staffing costs. Schools using Lexonik were keen to continue with it. They felt it was good value in terms of enabling pupils to make progress and were pleased to be getting a reduced annual fee for the next year. The schools using Accelerated Reader felt it had been value for money. As well as pupil progress, it enabled them to replenish the library stock and refurbish reading areas. The schools using Fresh Start felt that it would be good practice to continue with this intervention but were concerned that they would not have the budget for it.

Personal development of staff delivering the interventions

The findings show consistently that the views of staff delivering the interventions were overwhelmingly positive. Participants reported developing better relationships with disadvantaged pupils, often becoming the link person and chosen adult to whom pupils could talk. Whilst undoubtedly this is of benefit to these pupils, staff have also welcomed this development:

I am another point of contact in school…we have a good relationship there in that, you know, if I saw them in a Drama lesson or an Art lesson, we have that connection and we might refer to the intervention there… (FS Intervention Staff)

All participants talked about an increase in their own self-efficacy in teaching reading and their greater understanding of the particular intervention they were involved with. They were able to give specific examples of their learning, such as understanding suffixes and prefixes to support their own reading, or improving their IT skills:

You know the definition of words; you would do as an adult because you've come across those. But you'd never ever had to look at, prefixes and suffixes and even syllables in words and know what they mean… its obviously developed me as an individual massively because now I can say I can, but only since I've done Lexonik, I wouldn't have known that any other time. I've learnt a lot from the actual session. (L intervention staff)

This increase in teaching knowledge was useful not only for the pupils in the intervention groups, but also benefitted other pupils they taught. It has led to a better understanding of the range of books available for pupils, and more focussed conversations about reading with other stakeholders, including other staff, parents, governors and colleagues in other schools.

The teaching assistants talked about being empowered by being part of the intervention and the reading champions reflected on the positive effect that leading the intervention in school had on their professional esteem and development. They were able to demonstrate leadership skills and several developed a new set of professional skills outside of the classroom which has given them an increased sense of job satisfaction and confidence. This was also acknowledged by the senior leaders; as one reading champion reflected, being involved in the research aspect of the intervention has made her want to be involved with future projects. We are therefore laying the foundations for a more research active teaching staff in the case study schools.

Implications and lessons learnt

Process evaluation explores how an intervention or initiative works in practice, and helps to illuminate successful approaches and possible difficulties. It aims to explore what was delivered, by assessing fidelity to the intervention as initially conceived, and how it was delivered, including factors such as the duration of the sessions. In this paper we have highlighted the following key points arising from the process evaluation of the implementation of reading interventions in West Yorkshire schools, and suggest the following as a useful checklist to provide guidelines for schools:

The key point	The finding	Recommendations for schools
Quality of research supporting the intervention.	Although a local research school had approved the choice of interventions offered to schools, it seems that research evidence claiming to support the efficacy of the interventions was not always evaluated critically.	It would be useful to enlist support from university staff in order to receive additional guidance in critiquing the available literature when choosing and assessing interventions at an early stage of the project.
Implementation fidelity.	This varied between delivery staff and may have impacted on the reported pupil progress data. Re-assessment of intervention delivery was seen as a useful way of combating fidelity drift.	Staff training in the underpinning pedagogy alongside the practicalities of delivering the interventions would enable a deeper understanding of the theory behind the intervention. Authors of process evaluations should be encouraged to observe the training and delivery of the interventions, and question participants deeply about implementation fidelity, in order to compare beliefs about fidelity to observed practice.

Having a Reading Champion to lead and monitor the intervention was seen as essential.	An intervention champion brings energy and focus to the intervention, contributes to broader staff training, increases awareness and pedagogical development in relation to the intervention and provides a clear vision of its efficacy towards the progress of pupils.	An intervention champion should be enlisted who is committed to the intervention and does not view the role as an additional burden; rather, they see it as the opportunity for greater professional efficacy and growth.
Good resources are critical.	These include time, space, physical equipment and ongoing support from the intervention provider, which help to ensure the intervention has fidelity whilst raising its profile in school.	The practicalities and availability of intervention support should be taken into account when assessing the possibility of using particular interventions in school. Ongoing costs need to be considered.
Good initial training of as many staff as possible is recommended.	This enables a school to develop the capacity to roll out the intervention to as many pupils as necessary.	Intervention strategies should be used as part of day-to-day teaching to support future learning by pupils.
A community of practice.	All participants commented on how excellent ongoing support from the intervention providers, and networking meetings made them feel less isolated and better able to share ideas and best practice.	Networking encourages key staff to maintain a focus on the intervention and its wider applications. It gives opportunities to share experiences and solutions.
Engaging with other stakeholders.	This included getting governors involved with the initiative in schools and ensuring that parents were aware of what was happening.	Governors and parents should be informed about the intervention and given the skills to support and work with pupils alongside school staff, in order to support the implementation of the intervention.
A whole school approach.	Talking about the intervention widely and celebrating achievements at whole-school events was important in raising the profile of the interventions, and gaining the interest of non-intervention pupils and staff.	Schools should embed the intervention within the long-term development plan to ensure that good practice is maintained and developed year-on-year.

Table 2. Summary of findings and recommendations for schools

Conclusion

Reducing the attainment gap for disadvantaged children remains a key concern for educationalists, and insights emerging from this project suggest that in general, participation in reading interventions has many affective benefits for such children, apart from the reported progress data. Regular contact and better quality relationships with certain adults, coupled with having time and space to improve reading skills in small, supportive groups, whatever the intervention, have resulted in pupils' greater confidence and willingness to try decoding strategies across the curriculum. The extent of social benefits on learning are intangible and hard to capture in terms of data but are fundamental to enabling these disadvantaged pupils begin to close the gap in their achievement when compared to their peers. Koutsouris, Norwich & Bessudnov (2019: 20) suggest that measuring these affective gains in pupils is a matter for consideration for future studies.

Staff delivering the interventions have reported enhanced job satisfaction and increased certainty in their professional knowledge. This paper does not suggest that one intervention is 'better' or more effective than another; each intervention had an emphasis on different elements of reading and as such school leaders are best placed to assess the costs and practicalities of the interventions available in order to choose one that will most suit the needs of their pupils and environment. The same reading intervention will always look different in different contexts, depending on the characteristics of the area, the school and the children receiving it, as well as the individual teachers' and pupils' self-efficacy and motivation. Further, the same interventions delivered in the same setting by different staff had different levels of success which is precisely why process evaluation is important.

Troyer's analysis (2017) demonstrates that the vast majority of intervention research is short-term, in that data is collected in the first year of intervention implementation. This was also the case for the process evaluation of the West Yorkshire Project, and as such we are presenting a picture of immature programme implementation. Typically, as teachers gain experience of implementing an intervention pupil achievement increases.

Inviting key staff to reflect on the project has been invaluable; collectively participants have identified features which effect the successful implementation of reading interventions and their potential sustainability. When developing reading initiatives in schools, senior leaders may wish to consider the insights emerging from this research.

Acknowledgements

We would like to express our appreciation to everyone involved in the West Yorkshire Project. We are also grateful for the comments of the anonymous referees. The views expressed here are those of the authors alone and may not necessarily reflect those of their employing or funding organisations.

References

British Educational Research Association (BERA) (2018). Ethical guidelines for educational research, (fourth edition). London: BERA. Retrieved from https://www.bera.ac.uk/publication/ethical-guidelines-for-educational-research-2018 (accessed February 2019).

Brooks, G. (2016). *What works for pupils and young people with literacy difficulties?* Retrieved from http://www.interventionsforliteracy.org.uk/wpcontent/uploads/2017/11/What-Works-5th-edition-Rev-Oct-2016.pdf (accessed August 2020).

Catch Up® Literacy https://www.catchup.org/interventions/literacy.php (accessed February 2019).

Clark, C. (2014) *The Literacy Lives of 8 – 11-year-olds: 2005–2013.* London: National Literacy Trust.

Clipson-Boyles, S. (2000). The Catch Up project: a reading intervention in Year 3 for Level 1 readers (Research Note). *Journal of Research in Reading*, 23:1, pp 78-84.

Clipson-Boyles, S. (2001) Multi-Level Management and Literacy *Educational Management & Administration,* 29:1 pp 63–77.

Crenna-Jennings, W. (2018). *Key drivers of the disadvantage gap, literature review.* London: Education Policy Institute.

Department for Education. (2015). *Reading: the next steps*. London: Department for Education.

Department for Education. (2017). *Guidance: Strategic School Improvement Fund.* London: Department for Education.

Durlak, J. A. & DuPre, E. P. (2008) Implementation Matters: A Review of Research on the Influence of Implementation on Program Outcomes and the Factors Affecting Implementation. *American Journal of Community Psychology,* 41: 3-4, pp 327-350.

Dusenbury, L., Brannigan, R., Falco, M. & Hansen, W.B. (2003). A review of research on fidelity of implementation: implications for drug abuse prevention in school settings. *Health and Education Research*, 18, pp237–256.

Education Endowment Foundation, (2015). *Catch Up® Literacy Evaluation Report and Executive Summary.* Retrieved from www.educationendowmentfoundation.org.uk (accessed February 2019).

Education Endowment Foundation, (2018). *The Attainment Gap Report 2017*. London: Education Endowment Foundation.

Education Endowment Foundation, (2019). *Catch Up® Literacy (re-grant).* Retrieved from https://educationendowmentfoundation.org.uk/projects-and-evaluation/projects/catch-upliteracy-effectiveness-trial (accessed June 2019).

Gorard, S., Siddiqui, N., & See, B. H. (2015). *Fresh Start: Evaluation Report and Executive*

Summary. Retrieved from https://educationendowmentfoundation.org.uk/public/files/Projects/Evaluation_Reports/Fresh_Start.pdf (accessed May 2020).

Gorard, S., Siddiqui, N., & See, B. H. (2016). An evaluation of Fresh Start as a catch-up intervention: a trial conducted by teachers. *Educational Studies*, 42:1, pp98-113.

Humphrey, N., Lendrum, A., Ashworth, E., Frearson, K., Buck, R. & Kerr, K. (2016). *Implementation and process evaluation (IPE) for interventions in education settings: An introductory handbook*. London: Education Endowment Foundation.

Koutsouris, G., Norwich, B. & Bessudrov, A. (2019). Interpreting RCT, process evaluation and case study evidence in evaluating the Integrated Group Reading (IGR) programme: a teacher-led, classroom-based intervention for Year 2 and 3 pupils struggling to read, *Educational Review*, DOI: 10.1080/00131911.2018.155759

Lawton, K. & Warren, H. (2015). *The power of reading, how the next government can unlock every child's potential through reading*. London: Save the Children.

Lendrum, A. & Humphrey, N. (2012). The importance of studying the implementation of interventions in school settings. *Oxford Review of Education*, 38:5 pp1-18. http://dx.doi.org/10.1080/03054985.2012.734800

Ofsted. (2010). *Reading by six: How the best schools do it*. London: Crown Copyright.

Moore, G. F., Audrey, S., Barker, M., Bond, L., Bonell, C., Hardeman, W., . . . Baird, J. (2015). Process evaluation of complex interventions: Medical research council guidance. *BMJ,* 350, h1258.

Morrisroe, J. (2014). Literacy Changes Lives 2014: *A new perspective on health, employment and crime*. London: National Literacy Trust.

Penuel, W.R., Phillips, R.S. & Harris, C.J. (2014) Analysing teachers' curriculum implementation from integrity and actor-oriented perspectives, Journal of Curriculum Studies, 46:6, 751-777, DOI: 10.1080/00220272.2014.921841

Price, J., Salter, E., Wood, A., Woodhouse, F., & Zsargo, L. (2020). Strategic School Improvement Fund (SSIF) 'Narrowing the gap in reading attainment for disadvantaged pupils': A report into the impact of reading interventions in schools to support disadvantaged children. University of Huddersfield. https://huddersfield.box.com/s/knwbf6hmu3x5jrgqzxnl240fm0irxvtu

Renaissance Learning Ltd. (2007). Research Summary Renaissance Learning UK. London.

Ruth Miskin Training. (2018). Read Write Inc. Fresh Start. Retrieved from https://ruthmiskin.com/en/programmes/fresh-start/?region=uk (accessed February 2019).

Schmidt, R. (2008). Really Reading: What does Accelerated Reader teach adults and children? *Language Arts* 8:3, pp 202-211.

See, B. H., Gorard, S., & Siddiqui, N. (2015). Best practice in conducting RCTs: Lessons learnt from an independent evaluation of the Response-to-Intervention programme. *Studies in Educational Evaluation*, 47, 83–92.

Siddiqui, N. Gorard, S. & B Huat See, B. (2016). Accelerated Reader as a literacy catchup intervention during primary to secondary school transition phase. *Educational Review* 68:2, pp139-154.

Thompson, G., Madhuri, M. & Taylor, D. (2008). How the Accelerated Reader Program can become counterproductive for high school students. *Journal of Adolescent and Adult Literacy* 51:7 pp 550-560.

Troyer, H. (2017). Teacher implementation of an adolescent reading intervention. *Teaching and Teacher Education* 65 pp 21-33.

Walker, M., Sainsbury, M., Worth, J., Bamforth, H., & Betts, H. (2015). *Phonics Screening Check Evaluation: Final report*. London. Retrieved from https://www.gov.uk/government/publications/phonics-screening-check-evaluation-finalreport (accessed February 2019).

Warren, H. & Paxton, W. (2014). *How reading can help children escape from poverty.* London: Save the Children.