Public Policy Institute for Wales
Sefydliad Polisi Cyhoeddus i Gymru

The Role of Continuous Professional Development in Closing the Gap in Educational Attainment

September 2015

The Role of Continuous Professional Development in Closing the Gap in Educational Attainment:

A Review of What Works at Classroom, School and System Levels

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Summary

- The Minister for Education and Skills requested expert advice on how to improve the system of continuous professional development (CPD) for teachers and teaching assistants in schools across Wales to assist them in their efforts to break the link between educational attainment and poverty.

- There are three key challenges which confront attempts to achieve this: the literacy challenge (the high level of parental illiteracy amongst vulnerable children), the schooling challenge (the inability of schools to address the attainment gap without support), and the community challenge (vulnerable pupils are likely to have lower levels of parental engagement, cultural and social capital).

- CPD can play a role in meeting these challenges but is not sufficient on its own. Evidence suggests that closing the attainment gap requires a combination of:

  - high quality CPD;

  - initiatives to raise attainment of pupils from low - income families;

  - school-led CPD initiatives that involve multi-agency teams working to support schools, families and pupils;

  - parental and community engagement in planning change at the outset;

  - the development of committed and competent head teachers;

  - teachers with basic curriculum knowledge, qualities and classroom skills;

  - specific classroom level approaches for raising the attainment of children living in low income households;

  - the recruitment, development and retention of high quality teachers who are explicitly dedicated to narrowing the gap by working with pupils and their families; and

  - systemic approaches and effective leadership of the system as a whole.

- The report makes three key recommendations including the development of local school-based, school-led, community engaged multi-agency action strategies which are designed and implemented by committed and competent school leaders supported by skilled and carefully monitored teachers; piloting interventions; and dedicated resources combined with evidence based change models which ensure movement over time from high external resource dependency towards self-improving and self-sustaining approaches to closing the attainment gap.

Introduction

Much is now known about the attainment gap between pupils in schools. Statistics produced by the OECD (2010) show that there is a continuing gap between those in private and publicly funded schools and between schools serving highly disadvantaged school populations and others. Recent data also demonstrate that white working class students perform much more poorly than those in some minority ethnic groups. No matter how much emphasis is placed on the development of social justice and equity agendas in the education system by governments worldwide, it seems that the attainment gap remains.

The quality of teaching is undoubtedly an important factor in trying to address this gap and so continuing professional development (CPD) has as significant role to play. However, on its own it cannot reduce the attainment gap in isolation and a far more holistic approach with dedicated resources is required to address such an entrenched problem. This means increasing the levels of engagement of parents and other agencies and ensuring that they work together in local, school-led teams under the leadership of high quality, dedicated head teachers and teachers who have a specific, unrelenting and exclusive focus on raising the expectations and achievement of pupils from low-income homes.

This report is based on a systematic review of the international evidence on what works in closing the attainment gap. Each chapter focuses upon a key aspect of the action needed to narrow the gap and contains a number of findings. These are combined into ten clear messages from the evidence and three recommendations which flow from them.

Chapter 1: Contexts of Change in Wales

Over the last five years especially, there has been a plethora of innovative actions taken by the Welsh Government to improve the quality of the education experience for school age children and young people. Among the many expressions of the Welsh Government's intent noted by OECD are:

- Tackling Poverty Action Plan, 2012-2016 (Welsh Government, 2012).

- Pupil Deprivation Grant (Welsh Government, 2012).

- School Effectiveness Grant (Welsh Government, 2012).

- Foundation Phase Grant (Welsh Government, 2013b).

- Donaldson Review of the Curriculum (Donaldson, 2015).

- The Hill Report on the future delivery of education services in Wales (Hill, 2013).

- The 'banding' of schools according to a range of indicators such as attendance rates, GCSE results, relative improvements and the proportion of students receiving free school meals (Welsh Government, 2013b).

- Improving primary and secondary school teachers' professional skills to enable them to respond to and assess the individual learning needs of students by the introduction of the 'Practice, Review and Development Process' for all practitioners (OECD, 2014).

- The introduction of national reading and numeracy tests for students in Year 2 to Year 9, together with a national Literacy and Numeracy Framework (Welsh Government, 2013b).

- Strengthening school leadership through the 'Improving Schools' plan (Welsh Government, 2012a).

- A Review of Initial Teacher training (Tabberer, 2013).

- The Evaluation of the Pupil Deprivation Grant (Pye et al., 2014).

- Qualified for Life: An education improvement plan for 3-19 year old learners in Wales (Welsh Government, 2014b) which will run to 2020 and attempts to integrate action against four strategic objectives: an excellent workforce with strong pedagogy; an engaging curriculum which develops in children and young people an independent ability to apply knowledge and skills; nationally and internationally respected qualifications for young people; and leaders of education at every level working together in a self-improving system.

Taken together these actions represent strong intent to achieve change at all levels of the education system and provide a comprehensive set of answers to the problems of under-achievement. However, to succeed they require commitment and possession of high quality management and collaboration skills. Indeed, there is a risk of, 'So much Reform, So Little Change' (Payne, 2008). History and research is littered with evidence of the failure of many such attempts. Such evidence suggests that:

- narrowing the attainment gap is not a problem which can be solved easily or in the short term;

- closing it entirely may be regarded as an end in view rather than a short term objective;

- there is an urgent need for change oriented systemic evidence based upon the integration of classroom, school, community and system level policy and practice development; and

- the key to real change is the commitment and quality of teachers, and school leaders and the active involvement of parents and communities.

The answer to managing and resolving the dilemma of the persistent attainment gap is therefore likely to lie in the complex particularities of environments as well as in contextually responsive policies, strategies and actions taken by decision-makers in Wales itself.

The evidence for interventions and strategies which result in accelerated progress with 'pupil premium' pupils indicates that the most effective are those which are teacher led, classroom-based actions and it is the learning based skills that result in the most improved outcomes. However, narrowing the achievement gap will require a blend of strategies which include interventions in pre-service training programmes, dedicated head teacher and senior leader training and development, parental engagement, in and cross school in- service learning and development.

Strategies are more likely to be successful when they are multi-agency, targeted on different phases of formal education and on educating communities of parents. These strategies need to be tailored to local environments, led by those within them and supported by regional and government driven mechanisms to which all players can commit and within which all players feel a strong sense of ownership.

Since the major point at which influence may be brought to bear is the school, this must be the central focus for and leadership of the action. As the OECD reports:

"Many reform processes engage school leaders, teachers and other stakeholders in the formulation of the strategy and setting objectives in order to ensure their ownership of the strategy and their willingness to drive towards achieving the agreed objectives……and that the initiatives respond to the actual teaching and learning

needs of their schools" (OECD, 2014, p.121-122).

Perhaps the most important recently reported perspectives on the educational and social contexts in Wales are those provided in the recent OECD report on 'Improving Schools in Wales', written against a background of disappointing PISA results in which the performance of 15 year olds in PISA was judged to be "low overall, and…..too many students performing at low levels" (OECD, 2014, p.5).

It is clear from the OECD report that the Welsh Government has responded comprehensively and with considerable vigour to the challenges. Since 2009, there have been a host of system level initiatives to address the issues identified (see Annex for examples). It seems clear in the conclusions of the OECD that:

> "Despite a comprehensive school model and the provision of various grants to help schools better respond to diversity in their classrooms, schools are struggling to respond to high proportions of low performers, disadvantaged students and students with special learning need" (OECD, 2014, p.43).

It is equally clear that Wales faces particular challenges of system and culture change in its attempts to narrow the achievement gap. For example, although there is some evidence of progress (Welsh Government, 2014a), it is not substantial. Part of the explanation for this may lie in the progress and achievement of the one in five children who live in poverty and are entitled to free school meals (Public Health Wales Observatory, 2013). Part also, in the judgments made by Estyn (2013a) of the relatively poor quality of a significant number of school leaders, teachers and local authorities. Of the 22 local authorities, only five were judged to be 'good' (Estyn, 2013a).

Another part of the explanation may be found in the relative isolation of schools and communities, many of which are said to have 'actively discouraged' schools from seeking support outside the Local Authority' (Hill, 2013, cited in OECD, 2014, p.35). Finally, the sheer number of initiatives may also be partly responsible, especially as, not all of them appear to have engendered a strong sense of ownership or commitment among the stakeholders.

According to the OECD report:

> "Most of the differences in achievement in Wales occur within schools. This indicates that Wales' school system is relatively inclusive but at the same time points out the challenge for schools to respond to the individual learning needs of students, which may vary considerably within schools and classes" (OECD, 2014, p.5).

The OECD commends the Welsh Government's efforts to reduce the impact of socio-economic disadvantage on student performance. Its reforms aimed to raise the status of the

profession, ensure continuous professional development for teachers at all career stages, streamline and resource school-to-school collaboration and treat developing system leadership as a prime driver of educational reform.

Despite these initiatives, "students' socio-economic background and student characteristics continue to negatively affect their academic performance" (OECD, 2014, p.51). It has been suggested that this may be because of:

i)   inadequate targeting of funding on disadvantaged students (Estyn, 2013a);

ii) lack of synergy and co-ordination between programmes accompanied by too many bureaucratic demands (OECD, 2012);

iii) school-to-school collaboration and 'family' groupings of schools are at an early stage of development (Hill, 2013);

iv) lack of investment in the development of 'leadership capital', challenging though this is in a geographically dispersed communities (OECD, 2014, p.80; Hill, 2013); and

v)   a "…growing sense that stakeholders are overwhelmed by the many changes and have no clear understanding of the long-term goals beyond the current aspiration to be among the 20 best-performing education systems on PISA in reading by 2015" (OECD, 2014, p.115).

Estyn (2013a) found that only 6% of primary schools had excellent leadership. Hill (2013) reported that relatively few school leaders focused upon school improvement and raising students' academic standards. Of particular relevance to this report, teachers' professional development was monitored for its impact by only a third of school leaders (Estyn, 2013a).

There is, then, no quick fix. This is confirmed by the reports of research evidence presented in this report. There is a continuing persistence of difference, the literacy challenge, the schooling challenge, the community challenge, and too few partnerships between school, home, community and other social agencies. The remainder of this report presents the key findings and evidence which inform the ten clear messages and three recommendations on what works in reducing the attainment gap.

Chapter 2: Effective Classrooms, Effective Schools

Classroom level strategies for raising attainment

Finding 1: Research is unequivocal that classroom level approaches shown to be particularly effective at raising the attainment of children living in low income households combine: quality literacy teaching, positive learning environments, peer tutoring, formative assessment and feedback; structured group work/cooperative learning; and meta-cognitive strategies and high levels of teacher commitment and resilience. It is important, therefore, that teachers, especially those who work with groups of disadvantaged pupils, possess these qualities and are able to demonstrate their abilities to employ these skills (see for example Day & Gu, 2014; Sharples et al., 2011).

Figure 1: Effective classroom strategies for raising attainment
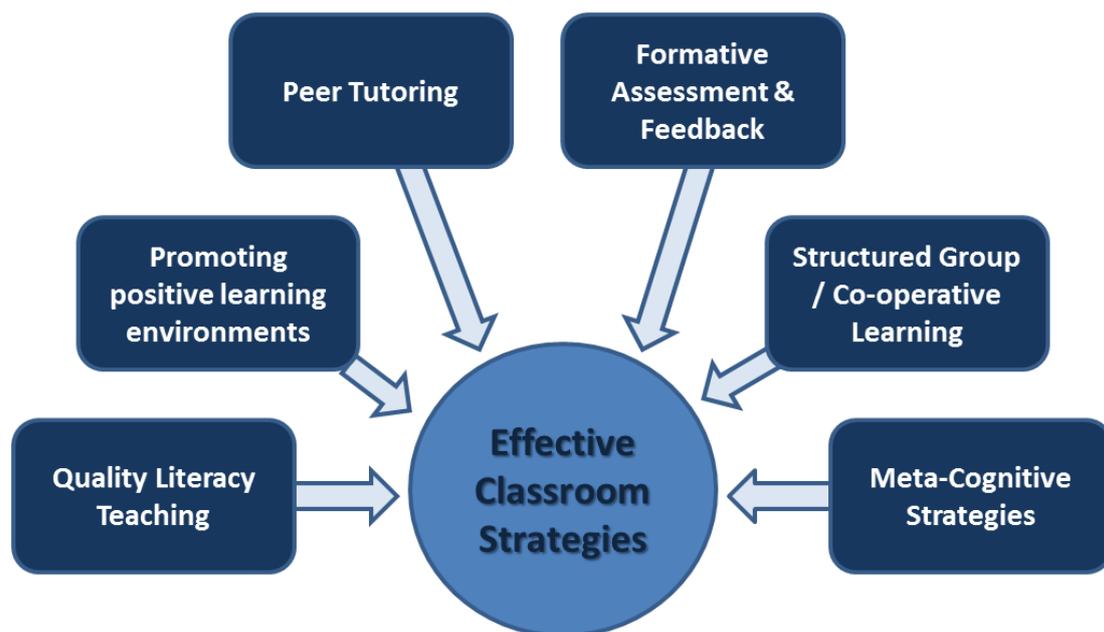
The evidence

(i) According to a recent report by the Joseph Rowntree Foundation on 'Closing the Attainment Gap in Scottish Education' (Sosu & Ellis, 2014):

"Studies of 'outlier' schools that consistently narrow the attainment gap associated with economically disadvantaged children…. indicate that the teachers prioritise literacy, make literacy enjoyable, and contextualise tasks to make them purposeful and relevant to pupils' out-of-school lives… Highly effective early years literacy

teachers engage in similar activities to their less effective colleagues, but weave their teaching more effectively through these activities, getting instructional density by seizing the moment to make teaching points, assessing understanding 'on the hoof' and providing explanations and repeat experiences as necessary" (Sosu & Ellis, 2014, p.30).

(ii) Sosu and Ellis (2014) found that peer tutoring (peer assisted learning and cross-age tutoring) "provides positive benefits to children from low-income households and helps close the attainment gap" (Sosu and Ellis, 2014, p.28) and that:

"Key elements of successful peer tutoring include provision of training for tutors on effective tutoring, active teacher involvement in organising tutoring groups, regular monitoring and support for tutors, and effective structuring of activities" (Sosu & Ellis, 2014, p.28-29).

(iii) The use of formative assessment with individuals in practice settings has been found to be effective for low achieving pupils especially (Kingston & Nash, 2011; Higgins et al., 2013). Kingston and Nash's (2011) systematic review showed that "effective assessment results in an additional 6% to 12% of all pupils moving into a proficient category" (reported in Sosu and Ellis, 2014, p.29).

(iv) There is a great deal of evidence, also, which shows that:

"children working with each other in small groups helps to raise attainment for disadvantaged pupils (Wegerif et al., 2004; Sharples et al., 2011; Higgins et al., 2013)…. [but that]…effective collaboration has to be taught across the school and facilitated by teachers. Simply putting children together in groups to work does not result in effective learning for children from disadvantaged backgrounds. Effective approaches are those where pupils are provided with support in how to work in groups, where tasks are carefully designed by teachers to foster effective group discussion, where teacher instruction is clear and focused on the learning to be undertaken, and where lower-achieving pupils are encouraged to talk and articulate their thinking to develop reasoning and problem-solving skills (Wegerif et al., 2004; Swan, 2006). On the whole, mixed ability groups result in positive impact on the learning of children from economically disadvantaged households, while ability grouping has a detrimental effect (Higgins et al., 2013). For the above, teachers need training and coaching in the use of well-structured group work approaches (Gillies & Boyle, 2005; Sharples et al., 2011)" (extract from Sosu & Ellis, 2014, p.28).

(v) Metacognitive training can be, "effective in improving the attainment of children from low income households" (Sosu & Ellis, 2014, p.29). Sosu and Ellis (2014, p.29-30) cite a 'Student

Success Skills Model' which employed structured group counselling through which students were helped to develop competencies in academic, social and self-management (Campbell & Brigham, 2005). They reported that:

> "those receiving this programme showed significantly improved attainment in both maths and reading compared with control pupils. Effective metacognitive strategies are those that are well structured and accompanied by intensive professional development and support for teachers. They focus on explicitly teaching students how to plan, monitor and evaluate their own learning, and provide opportunities for them to try these strategies out. Additionally, they tend to be group-based and specifically focused on raising attainment of children from poor backgrounds" (Sosu & Ellis, 2014, p.30).

School level strategies for raising standards of literacy

Finding 2: Raising standards of literacy is key to efforts to 'closing the gap'. This requires schools to prioritise high quality, intensive literacy teaching.

(i) **Successful schools prioritise high quality, intense literacy teaching. According to Ofsted (2011), schools which are successful at overcoming the barriers to literacy faced by pupils from disadvantaged backgrounds, have a number of factors in common. These include:**

- high expectations;

- an emphasis on speaking and listening from an early age;

- systematic phonics teaching;

- sharp assessment of progress;

- effective use of data; and

- effective parent partnerships.

Such high expectations were created through school leaders with formally acquired knowledge and understanding of literacy who focused on raising achievement for all. In reporting on strategies for raising standards of literacy, Ofsted (2011) found that:

(ii) **Decoding and fluency are as important as mastering phonics.**

(iii) **Substantive content knowledge helps comprehension.**

(iv) **The provision of intensive tuition by either qualified teachers, trained teaching**

assistants, or trained volunteers has a positive impact on disadvantaged pupils.

(v) **A promising literacy catch-up programme for pupils from disadvantaged backgrounds is 'Response to Intervention' (RTI).**

The evidence

(i) Ofsted (2011) reported that effective teachers recognised the extremely limited language and vocabulary skills of many socio-economically disadvantaged pupils and sought to address this, by for example, asking Year 5 pupils to find new vocabulary in a thesaurus to describe the emotions of a character in a story and explain how their chosen words fitted.

(ii) Schools that were successful were those in which all staff used assessment and were trained in phonics. They regularly used analytical and diagnostic assessment tools to identify pupils' strengths and weaknesses, had a clear focus on helping pupils as individuals and in small groups to meet the success criteria set for them and involved parents.

iii) Schools which made effective use of data:

- focused closely on the attainment and progress of groups of pupils (e.g. those eligible for free school meals) as well as individuals; and

- set out to support any pupils identified as being at risk of falling behind e.g. through setting up a 'reading champions' group in school for those pupils not reading at home.

Examples of how schools successfully forged partnerships with parents include:

- a nursery school which employed a speech therapist to run a six-week course for parents of children with speech problems that gave them 'talking tips'; and

- a secondary school which used learning mentors to develop a constructive rapport with both pupils and parents about the progress being made.

(iv) In their synthesis of evidence of effective strategies for closing the achievement gaps in literacy, Sosu and Ellis (2014, p.31) found, however, that:

"The arguments around phonics and teaching pupils to decode print have been fierce and often unhelpfully reductionist'. Citing large scale studies in the USA (Denton & West, 2002) and a cross national study that included Scotland (Thomson et al., 2008), they concluded that, 'classes that focused heavily on phonics had less instructional time available to practice reading continuous text' that 'over-prioritising phonics, or atomistic elements of reading, may not be the best way to promote literacy in disadvantaged groups' and that 'Research does indicate that children

starting school with low letter and vocabulary knowledge (associated with socioeconomically disadvantaged groups) benefit from small-group, teacher-led, explicit literacy teaching at the start of their school career, with more open-ended literacy activities as the year progresses" (Sosu & Ellis, 2014, p.31).

Features of schools that are successful in raising attainment for low SES pupils

Finding 3: A single focus approach to 'closing the gap' is unlikely to lead to success. Schools which are successful demonstrate the use of a combination of strategies: strong foci on academic learning, the development of social, emotional and behavioural competencies, pupil engagement through strong pupil voice, extra-curricular activities, and parental and community engagement.

Figure 2: Effective whole school strategies for raising attainment
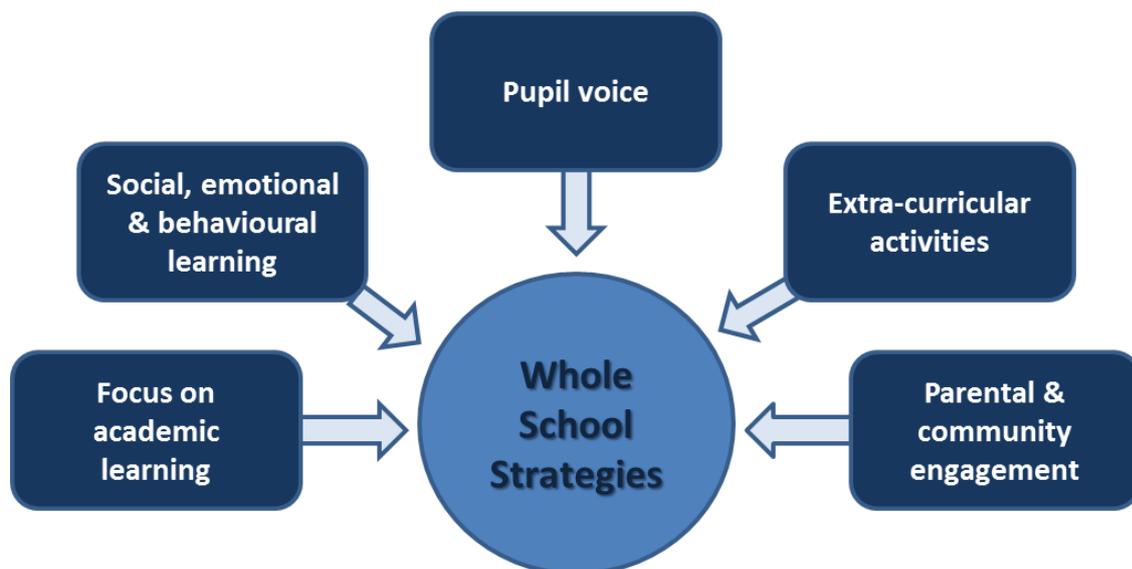
The evidence

i)   Day et al. (2011) examined the characteristics shared by successful schools and found that they shared these characteristics with high-performing, high-poverty schools. The characteristics they found included: a strong academic focus; an ethic of high expectations; a caring, supportive culture; and teachers who believed in the pupils. Such schools dedicated a part of each day to reading or literacy activities and/or frequently regrouped pupils to meet individual needs.

ii)   Evidence from Joseph Rowntree Foundation's research and elsewhere suggests that, if

carefully implemented, improving social, emotional and behavioural (SEB) competencies could play an important role in closing the attainment gap (Scott *et al.* 2010; Sharples *et al.*, 2011; Gorard *et al.*, 2012; Higgins *et al.*, 2013). Sosu & Ellis also reported that:

> "Successful programmes are those that integrate SEB learning into a general strategy aimed at increasing educational attainment for children from low-income backgrounds, rather than solely for improving SEB learning" (Sosu & Ellis, 2014, p.26).

A review by the Department for Education's Schools Analysis and Research Division (DfE, 2009) identified pupil voice as an "important means of engaging learners from deprived backgrounds" (DfE, 2009, p. 84) who may not have had their views sought before, by giving them the opportunity to share their views about learning with their teachers. There were a number of ways in which pupils contributed their views; including, "representation on a school council, active involvement in decision making" (DfE, 2009, p.84), and giving feedback about their learning to teachers and each other. A key challenge identified in the report was to ensure that all pupil voices were able to be heard. Benefits identified in the DfE Report included:

- raised self-esteem, social, personal and emotional confidence, and sense of responsibility;

- improved behaviour and attendance;

- the development of a positive approach to learning;

- improved skills in working with others; and

- sharing learning with their teachers by giving them feedback

(DfE, 2009 p. 84).

iii) Reporting research by Cummings et al. (2012), Gorrard (2012) and Sosu and Ellis (2014) found that:

> "participation in extra-curricular academically focused activities, such as the provision of study support, has a significant impact on narrowing the attainment gap" and that, " This area is, therefore, worth further investment" (Sosu & Ellis, 2014, p.35). The review by the Department for Education's Schools Analysis and Research Division (DfE, 2009) also identified how study support (including homework clubs) helped to provide additional learning opportunities for pupils from low income families. One way in which it did so was in providing the pupils with educational resources, e.g. a place to work, books and computers, which they didn't have access

to at home, that enabled them to do their homework. More active forms of after-hours study support were also effective, particularly when they were based on:

- small groups with individual attention;

- flexible content reflecting pupils' interests and needs;

- activities structured and run in a different way from lessons; and

- staff who were skilled at communicating and negotiating"

(Kendall et al, 2005; cited in DfE, 2009 p.75).

School focused multi-agency teams

Finding 4: "School-led initiatives based on multi-agency teams working to support schools, families and children have a positive impact on pupils' attainment, attendance, behaviour and well-being and lead to improved parenting skills, parents' access to services, and links between the home and school" (DfE, 2009, p. 82).

The evidence

i)   According to DfE (2009):

"coherent interventions and support systems that involve multiple agencies are helpful in supporting the often complex needs of children and families living with deprivation. Key success factors include: sensitivity to local communities and flexibility in responding to changing priorities; a single multiagency action plan, and joined up approaches to workforce development and training; a named lead professional or key worker allocated to each client, who is responsible for coordinating a package of support across agencies; joint assessments of need, mapping of service provision and gaps, and joint target setting; effective systems for data sharing; joint commissioning of services; and streamlined referral processes" (DfE, 2009, p.69).

> **Example of a multi-agency programme for improving parenting skills**
>
> **"Executive Summary**
>
> **The project**
>
> The SPOKES (Supporting Parents on Kids Education in Schools) programme is a ten-week intervention for parents designed to help struggling readers in Year 1. The programme teaches parents strategies to support their children's reading such as listening to children read, pausing to let them work out words, and praising them when they concentrate and problem-solve.
>
> The programme was based primarily in Plymouth and was conducted with six cohorts of children and parents, one cohort each term from Spring term 2012 to Autumn term 2014. This evaluation was designed to assess the impact of the programme on children's reading outcomes. It was a randomised controlled trial involving the parents of 808 children from 68 primary schools. Parents of Year 1 children identified as 'struggling readers' were recruited through their child's school to participate in the project. Parents of the intervention children participated in ten weekly SPOKES sessions over one term and parents of children in a comparison group received books and newsletters. The impact evaluation measured the impact of SPOKES—on children's literacy (letter identification, word identification, and phonetic awareness) and on a range of social and emotional outcomes—at the end of the programme and at six- and twelve-month follow up points. The process evaluation was designed to collect parents' views and experiences of SPOKES, to help to explain the findings from of the impact evaluation, and to provide feedback to inform the future design and delivery of the programme" (Tracey et al, 2016, p.4).
>
> Sosu and Ellis (2014) reported that:
>
> > "Findings showed that compared with control groups, the reading attainment of those involved in the intervention increased by more than six months. The intervention was particularly effective for children from disadvantaged backgrounds, thereby reducing the attainment gap" (Sosu & Ellis, 2014, p.25).

Parental engagement

Finding 5: Engaging and supporting parents can have a larger and more positive effect on pupil outcomes than the effect of schooling itself.

The evidence

(i)   More recent research in Wales also shows that:

"socio-economic disadvantage is the single biggest obstacle to achievement in

education and …. poverty currently affects one in three children in Wales. Most schools identify engaging parents as the biggest single challenge in tackling the under-achievement of disadvantaged learners… the report on parental involvement in primary schools showed that closer links between home and school has a significant impact on learners' wellbeing'' (Estyn, 2011).

(ii)   This research also shows that:

"schools that reach out and effectively engage families in children's learning and the life of the school and which place themselves at the centre of their communities will see improved outcomes for learners, particularly from deprived communities" (Welsh Government, 2014c).

Finding 6: Engaging parents as active change agents needs to take account of the availability of time, levels of knowledge and skills, 'fit for purpose', timely support and motivations.

The evidence

i)   The 2009 review carried out by the DfE School's Analysis and Research Division (DfE, 2009) found that engaging and supporting parents had a large and positive effect on pupil outcomes; larger than the effect of schooling itself. Factors that supported parental involvement included:

- strategic planning which "embeds parental involvement into whole school development planning" (DfE, 2009, p.69). Examples of this in Harris and Goodall (2007, p.31) identified in the DfE report are:

    o   "planning for teacher/Teaching Assistant training in working with parents and carers, or

    o   organising effective home-school liaison during transition;

    o   sustained support from teachers for parents and carers to help their children learn, such as giving;

    o   guidance to parents on how best to support their children when they have homework to complete;

    o   building trusting, collaborative relationships amongst teachers, families and community members that are sensitive to the needs of families from different backgrounds; and

    o   using new technologies to inform parents and carers about, and engage them in, their children's learning, progress and behaviour" (Harris

&Goodall, 2007 p.31, cited in DfE, 2009, p. 98-99).

ii)   Policy documents in Wales have also emphasised the importance of working closely with the community:

"Most secondary schools …have a limited understanding of what it means to be community-focussed… Very few school leaders have been trained in the skills needed to tackle the impact of disadvantage, the skills in partnership working, engaging the community, or using distributed leadership in these contexts" (Estyn, 2011).

It is worth noting that when this report was produced, Cardiff, the sixth most deprived local authority in Wales, had identified community-focused school co-ordinators in each of its secondary schools and that pupils performed at a better level and achieved above the expected performance in most key stages than might be expected, when compared with other local authorities.

iii)   Sosu and Ellis (2014, p.25) concluded from their evidence that "parental involvement programmes are effective when they use qualified professionals to work with parents, are of longer duration and are group-based" and that "parental involvement is strengthened when combined with approaches for raising parental expectations and positive parenting". They found also that:

"A crucial issue with parental involvement initiatives is high levels of dropout. This is attributed to the intensity of demand that the programmes make on parents" (Sosu & Ellis, 2014, p.25).

Example parenting interventions

A DfE funded research project aimed to compare the effectiveness of three evidence-based parenting group interventions and usual services (Signposting) in reducing the level of conduct problems and improving the literacy of children in Year 1 and 2 of a sample of infant schools in Hackney and Plymouth. It claims to be the largest survey of primary school age children's behaviour in inner-city areas in the UK. The researchers conducted intervention programmes with 171 families in Hackney and Plymouth over a period of 8 and 5 terms respectively. Of these families, 77% attended more than half the course. Assessments at 12 weeks following the interventions found that children in the intervention groups were reported by parents to have fewer conduct problems and to have improved their reading more than children in the 'Signposting' group; parents in the intervention groups felt more confident in managing their children's behaviour; and parents in the Literacy group reported that their children's reading improved by a greater degree than those in the other intervention groups or the 'Signposting' group. The problem in this research, like many other quasi-experimental research, is that it was not possible to follow up the changes over a longer period and so the research is unable to reveal longer-term sustained impact or otherwise (DfE Interim Report, 2012).

Chapter 3: The Professional Development of Teachers: Closing the Achievement Gap

Finding 7: Successful initiatives that raise attainment of pupils from low income families are always supported by targeted and sustained "evidence-informed, high-quality, context-specific, intensive and long-term professional development for teachers and teaching assistants" (Sosu & Ellis, 2014, p.33). Models of CPD which involve classroom educators in analysing their practices over a sustained period are also likely to result in increased commitment and improvements in practice.

The evidence

i)   Sosu and Ellis (2014) found strong evidence from intervention programmes in the USA and UK that "successful initiatives and interventions that raise attainment for children from low income families … are backed by evidence-informed, high-quality, context-specific, intensive and long-term professional development for teachers and teaching assistants" where the focus was on, "developing teacher content knowledge, literacy pedagogies, assessment and feedback; demonstrations of pedagogies by coaches;

and observing and coaching teachers in the classroom, followed by regular group reflections after each cycle of implementation by teachers" and in which there was, "systematic monitoring of impact on attainment" (Sosu & Ellis, 2014, p.33-34).

Two key issues which they identified were that: i) although "teachers tend to receive significantly higher support during initial implementation of new programmes" (Sosu & Ellis, 2014, p.34), this is not sustained over the longer term, and that ii) "the nature of professional development programmes needs careful consideration in terms of being informed by robust evidence, relating in particular to their impact on the attainment of children from disadvantaged households" (Sosu & Ellis, 2014, p.34).

It is not always acknowledged that adaptation and change to new curricula and ways of working is likely to be a process of transition rather than a single action, and that for change to be successful in the longer term requires not only teachers' energy and commitment (Day et al; 2007) but also longer term resource investment. The example below represents a research informed and researcher supported, collaborative model designed to produce sustained change, and is presented as a contrast to short term, quick fix models.

Example 1: Developing teachers' knowledge of how to improve pupils' reasoning skills (Wegerif et al., 2004)

"This six month research project involved three target schools in which Year 2 teachers implemented a programme of lessons designed to improve the children's spoken language skills, and three matched control schools in which teachers and pupils pursued their normal activities. The researchers argued that having poor communication skills reduces children's participation in lessons, excludes them from learning activities and can result in lower levels of achievement. The schools had a high proportion of children from social groups commonly described as under-achieving (for example children from low income families who had recently arrived from the Indian subcontinent and for whom English was an additional language) and had reported low levels of academic achievement.

At the start of the six-month project, all the Year 2 teachers in the target schools received a day of professional development and two twilight sessions. The researchers also visited all the target schools regularly throughout the project to provide the teachers with informal support. The teachers, with the help of the researchers, generated a programme of lessons designed to improve the children's group talk skills.

The programme consisted of a set of five core lessons which focused on developing children's awareness and skills in using spoken language and a further set of nine lessons which applied the approach to curriculum subjects, such as history and geography. Some of the key features of the lessons were:

• the learning objectives for group talk were made explicit in the introduction;

• groups reflected on the quality of their talk in plenary sessions;

• the class were directly taught skills such as asking questions; and

• the teacher focused the class on the quality of their talk, intervened to support groups during discussion and acted as a model when talking to the class.

The classes also created and agreed upon a set of ground rules for talk that would enable them to reach a group consensus. These included, for example:

• everyone in the group is encouraged to speak to other group members;

• reasons are expected;

• contributions are considered with respect;

• challenges are accepted;

• alternatives are discussed before a decision is taken; and

• the group seeks to reach agreement.

The children usually worked in mixed ability groups of three during these lessons. Having mixed ability groups enabled each group to have a fluent reader/writer. No set roles were given to the children (other than that of occasional scribe or reader) to encourage a perception that all contributions to the group were equal.

All the teachers in the target schools reported that the programme resulted in improved interactions and participation by the pupils. They asked more questions and gave reasons more often than the control group children. They also learned to involve each other, listen carefully to what each other said and respond constructively, even if their response was a challenge. In addition, target group children completed more puzzles correctly on a reasoning test after the programme than before. The control group children's interactions did not show a similar pattern of change" (extract from Wegerif et al, 2004 p.146-155).

Example 2: Improving student achievement in mathematics through a model of sustained CPD: a 4 year programme (Balfanz, MacIver & Byrnes, 2006)

"Specialists in the Talent Development (TD) programme introduced teachers from three middle schools (ages 10-14 in the USA to a new mathematics curriculum (the Talent Development programme) through a series of monthly workshops. In addition, mentors provided in-class support to help teachers implement and adapt the new strategies. The programme took place against a background of other district-wide reforms which also aimed at improving, among other things, maths teaching and attainment. To establish the effectiveness of the programme, researchers compared test results over four years in the three experimental schools with those in three comparison schools which were implementing the district-wide reforms, but not participating in the programme.

Despite the relative disadvantage of the participating schools (high staff turnover, inconsistency of teaching, high levels of deprivation and low levels of attainment among the students), the researchers

found that their model of CPD, along with organisational changes, brought about positive change in teacher practice and improvements in learning.

On the whole, the children whose teachers took part in the programme achieved at a significantly higher level than students in the control schools. All types of students across the ability range benefited from the school's participation, in particular in developing problem-solving skills...Student responses showed that 71% of the classrooms used five or more of the nine recommended instructional practices at the recommended frequencies. These practices included, for example, showing students how to use their knowledge about the total number of degrees in a circle, and the relationships among angles, to work out the size of angles without using a protractor. In comparison the average implementation rate of classrooms in the control schools was 51%.

The results of this study suggest that a well-planned, long term CPD programme coupled with organisational change can have a significant impact on teacher learning, implementing new practice, and on student performance…however, the researchers found that not every student made gains. A sizeable minority were unable to close the achievement gap between their own scores and the national average. The researchers identified high staff turnover and inconsistency of support from head teachers and the local authority as hindering wider success.

They concluded that additional reforms and support would be needed for a wider spread of benefits" (extracts taken from CUREE, 2008, p.1-2).

**Example 3: A research-informed model for the professional development of teachers (Adey, 2006)**

This model involved collaboration between academics, schools and local authorities and used layered training and support through mentors experienced in the use of cognitive acceleration for the promotion of higher level thinking in students aged 5-15 years. It ran over a two-year intervention period. The work compared the results of the experimental schools with control schools. The results showed consistently 'large, long-term, generalised effects of cognitive acceleration on students' intellectual growth'.

Although the work was not focussed on 'closing the gap', nevertheless it represents a model of research-informed CPD which, as with others in this section, eschews the 'quick fix' approaches, claiming that these offer only simple 'tactics' which underestimate the pedagogical 'subtleties required to enhance students' thinking'. When the researchers re-visited the schools two years after the end of the intervention support they found that over 50% were still implementing the cognitive acceleration programme. The researchers concluded that:

• "professional development is the development of individuals not institutions;

• schools need structural systems, such as departmental works-schemes and priorities, and employment strategies if they are to maintain the effect of a PD programme across staff changes; and

• the role of senior management in schools is crucial to success".

(Adey, 2006, p. 53)

(Adey, 2006, p. 55)
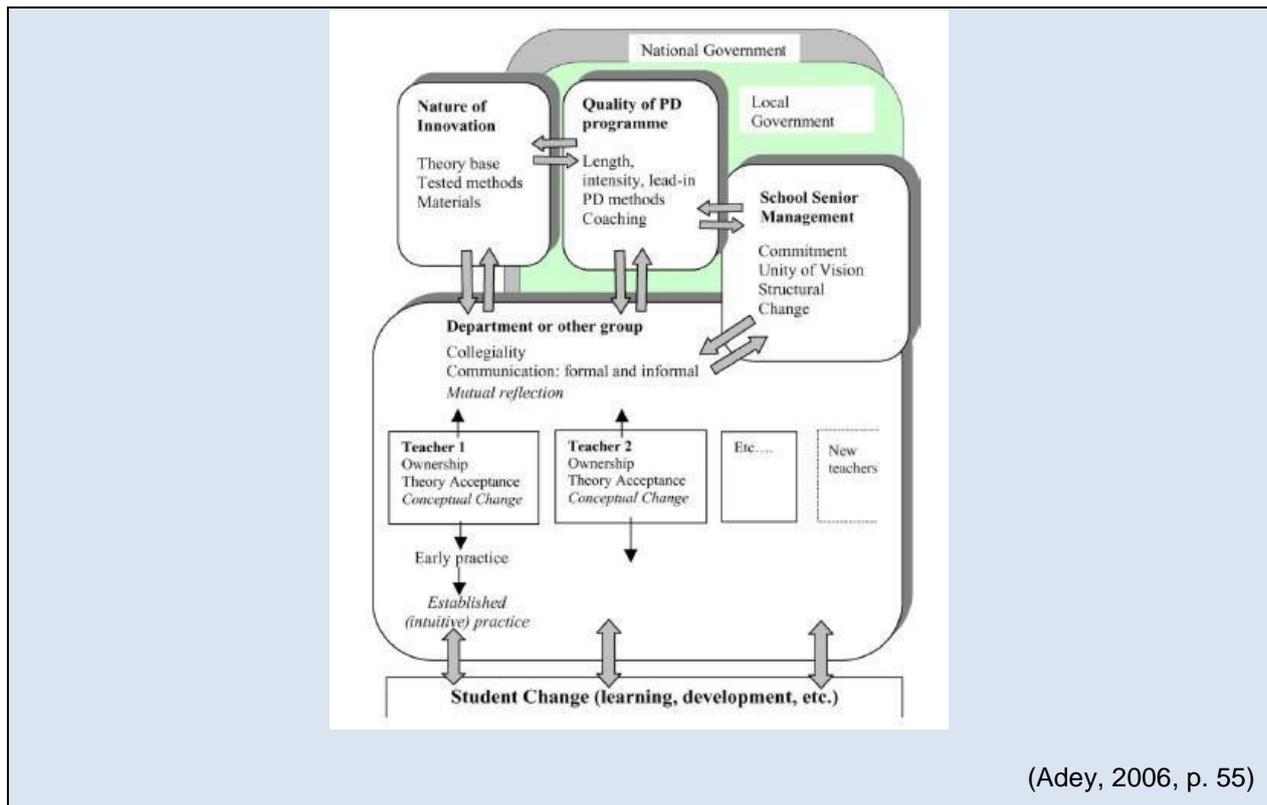
Finding 8: Evidence from systematic reviews of research shows that CPD for teachers is more likely to benefit students if it is collaborative, supported by specialist expertise, sustained over time, connects theory to practice, and is focused directly or indirectly on both teachers' and pupils' individual learning needs (Cordingley, et al., 2003; 2005a; 2005b; 2007; Timperley et al., 2007).

The evidence

A strong corpus of research highlights the importance of continuing professional development for teachers which:

i)   focuses on student outcomes (Parr & Timperley, 2010; Bell et al., 2010; Darling-Hammond et al., 2007).

ii)   focuses on teacher's motivational, commitment, resilience and well-being needs (Goodall et al., 2005; Day et al., 2007; Day & Gu, 2014).

iii)   invests time in development. In an international review of CPD, Darling Hammond and Richardson (2007) found that teachers who participated in CPD for an average of 49 hours over a year increased student achievement by 21 percentile points and that teachers who received 80 or more hours of professional development were more likely to put new teaching strategies into practice.

iv)   is actively promoted and led by school leaders. Robinson et al's. (2009) best evidence synthesis of effective school leadership identified five key dimensions. Of these, leaders who promoted and participated in professional development had the largest effect size.

Finding 9: Positive teacher, pupil and school outcomes are likely when schools and CPD leaders structure CPD so that it is collaborative, and provides teachers with opportunities to interpret externally mandated CPD collaboratively in their own contexts.

The evidence

(i) **Evidence from systematic reviews of research (Cordingley, et al., 2004; 2005a; 2005b; 2007; Timperley et al., 2007) shows that CPD for teachers is more likely to benefit students if it:**

- is **collaborative** – involves staff working together, identifying starting points, sharing evidence about practice and trying out new approaches;

- is **supported by specialist expertise**, usually drawn from beyond the learning setting;

- **focuses on aspirations for students** – which provides the moral imperative and shared focus;

- is **sustained over time** – professional development sustained over months (two to three terms) had substantially more impact on practice benefiting students than shorter engagement;

- **connects theory to practice**; and

- **is teacher need and school context sensitive.**

Finding 10: Improvements in pupils' learning are linked to CPD when teachers take ownership and are emotionally engaged.

The evidence

(i) Cordingley et al.'s (2005a; 2005b; 2007) systematic reviews identified a variety of ways in which CPD programmes gave teachers the opportunity to take some ownership of their CPD by, for example, participation in planning, need identification, and leadership opportunities.

(ii) Effective CPD also has been shown to have an impact on affective aspects of professional learning as well as on teaching. Such impact relates to teachers' confidence, attitudes and

motivation, including their disposition to working with others and to their own professional learning. All of the teacher focused studies reviewed reported observed and self-reported changes in at least one affective aspect of professional learning, including: increased motivation; increased confidence; changes in attitudes to teaching and learning (Cordingley, et al., 2004; 2005a; 2005b; 2007; Timperley et al., 2007).

Finding 11: The characteristics of professional learning: collaboratively oriented professional development has a more powerful effect on teachers' capacities to produce gains in pupils' learning that which is oriented only to the needs of individual teachers

The evidence

(i) A systematic review of the evidence by (Cordingley et al., 2005b) showed that:

- all the studies of collaborative CPD found links between the CPD and "positive changes in teachers' practice, attitudes or beliefs";

- almost all of the collaborative studies that collected data about student impact reported evidence of improvements in pupils' learning and most also found that there were "positive changes in either their behaviour, attitudes or both"; and

- around half the collaborative studies provided evidence that "changes in teachers' classroom behaviours were accompanied by positive changes in attitude to their professional development"

(Cordingley et al, 2005b, p. 5-6).

The review's analysis of the CPD processes revealed a spectrum of collaborative activity:

- Teachers reflecting on their practice.

- Learning from theory or other people's research.

- Structured professional dialogue.

- Shared planning as a learning activity.

- Experimentation with new strategies and approaches.

By contrast, the studies of individually oriented CPD showed only some evidence of changes in teachers' practices and beliefs, and a modest impact on behaviours and attitudes of pupils rather than on learning outcomes.

(Cordingley et al, 2005b, p.81-82).

(ii) Bolam and Weindling (2006) found mentoring and coaching to be a key component of

effective CPD. Kretlow and Bartholomew (2010) found that coaching can promote high fidelity of evidence-based practices from training settings to real classroom settings. They emphasised the importance of using observations – including, teachers learning to learn from observing the practice of others – plus a combination of instructive training and individualised follow-up coaching. They claim that co-coaching empowers practitioners to try out new things by providing a context of reciprocal vulnerability which speeds up the development of trust whilst specialist coaches and mentors support, encourage, facilitate and challenge professional learners and demonstrate new approaches in action in their context.

(iii) Action research can be a successful mechanism for helping teachers translate their professional development experiences into their practice and to explore the impact on student achievement (Bell et al., 2010; Timperley et al., 2006; Crippen et al., 2010). However, teachers need support in building their skills in collecting evidence about student progress (Parr & Timperley, 2010; Bell et al., 2010).

(iv) Bell et al.'s (2006) systematic review found that networks can be highly effective vehicles for improving teaching, learning and attainment when collaborations within and between schools draw on internal and external expertise, and are clearly focused on learning outcomes for particular student groups. The quality of the collaboration and the selection of a focus that can draw contributions from all members is more important than the size of the network.

(v) Systematic reviews of CPD (Cordingley, et al., 2004; 2005a; 2005b; 2007; Timperley et al., 2007) found that effective CPD involves:

- "enquiry oriented learning activities spread over (usually) two terms or more;

- peer support to embed new practices and support risk taking;

- professional dialogue rooted directly in evidence from trying out new things and focused on understanding why things do and don't work in order to build an underpinning rationale (also known as 'professional reflection');

- learning from observing the practice of others;

- carefully targeted (usually external) specialist expertise including the selection of high leverage strategies, modelling them, the provision of support via observation and debriefing and gradual transfer of control over learning to the teachers involved; and

- ambitious goals set in the context of aspirations for pupils"

(Cordingley & Bell, 2012, p.8).

(vi) Action research can be a successful mechanism for helping teachers translate their professional development experiences into their practice and to explore the impact on student achievement (Bell et al., 2010; Timperley et al., 2006; Crippen et al., 2010). However, teachers need support in building their skills in collecting evidence about student progress (Parr & Timperley, 2010; Bell et al., 2010).

Finding 12: Specialists help teachers' to generate and use new knowledge in practice by modelling the new ideas in a classroom setting supporting the teachers to make changes through sustained mentoring and coaching, and helping teachers to collaborate with, and support one another. When teachers are supported by their head teachers and specialists, they are likely to learn new approaches to teaching, more about their subject, and more about pupil learning. This in turn is likely to help them to enhance their pupils' engagement, confidence, attitudes, and performance.

The evidence

(i) Cordingley et al.'s (2007) systematic review set out to unpack what specialists contribute to CPD and how they do it in contexts where there is evidence of a positive impact on pupil learning. The review found the specialists not only introduced the teachers to new knowledge and approaches, but also supported teachers over time in using their new knowledge to develop their skills and make changes to their practice.

(ii) In the studies examined by the reviewers, all of the specialists combined initial 'input' sessions with a programme of on-going support for the teachers as they began to implement changes in their own classrooms. In the support sessions, the specialists worked with teachers to interpret and implement the new knowledge or skill, for the teachers' own contexts and starting points. The sessions also focused on planning consequent changes to the teachers' practice. Contact time with the specialist was spread regularly across the programme (usually between one and three terms) and was at least monthly, with individual sessions frequently lasting more than two hours. CPD activities mostly took place during school hours and on school premises.

(iii) Reporting on the work of three systematic reviews of CPD research, the GTCE (2008) identified a number of specific actions which the specialists took to develop teachers' classroom practice and thereby enhance pupil learning. These included:

- "making the research evidence base available;

- making explicit links between professional learning and pupil learning;

- facilitating teachers' independence, autonomy and control;

- taking account of teachers' starting points and the emotional content of learning;

- encouraging experimentation;

- encouraging peer support; and

- helping teachers embed CPD within school goals and leadership" (GTCE, 2008, p.12-15).

Specialists helped teachers to use their new knowledge in practice in a number of ways. These included:

- "modelling the new ideas in a classroom setting;

- supporting the teachers to make changes through sustained mentoring and coaching; and

- helping teachers to collaborate with, and support one another" (GTCE, 2008, p.16).

The review summarised the work of the reviews, concluding that "for specialist-led CPD to be successful it was important that specialists paid as much attention to adult learning and to teachers' needs, as to the transmission of new and 'expert' knowledge about classroom teaching and learning. When teachers were supported by specialists in this way, they learned new approaches to teaching, more about their subject, and more about pupil learning. This in turn helped them to enhance their pupils' engagement, confidence, attitudes, and performance" (GTCE, 2008, p. 1).

An example of teacher learning linked with pupil learning (from GTCE, 2008)

Zetlin et al. (1998) described "how the researchers worked with teachers from five primary schools located in an area of deprivation, where most pupils were living at or below poverty level. At an initial meeting at each school, the researchers led a discussion focused on the achievement patterns that concerned school staff. These included that:

- large numbers of pupils were functioning well below national norms in reading;

- most of the least adequately performing pupils were not enrolled in any programme that provided intensive instruction addressing the academic areas they had difficulty with; and

- many of the lowest scoring 'limited English proficient' pupils were not receiving adequate language development support.

The researchers then worked collaboratively with the teachers to design and implement a language-rich developmental programme that integrated oral language with reading and writing.….The approach was based on research that suggested that providing low-income children with multiple opportunities to hear, explore and talk about literature during their early school years, allowed them to develop their language to a similar level to that of their more privileged peers" (GTCE, 2008, p.6).

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In similar studies of specialist-led CPD referred to in the GTCE report by Bryant et al. (2001) and Cho (2002), the specialists were all explicitly involved in handing over control of the learning to the teachers. They used a range of strategies for doing this including:

- "involving teachers in designing teaching and learning activities whilst providing intensive support which they gradually withdrew;

- modelling new approaches and supporting teachers in practising different aspects with their classes;

- making some teachers 'champions' or leaders of their colleagues' learning" (Bryant et al., 2001 cited in GTCE, 2008, p.6);

- teachers watching experimentation modelled by expert teachers; and

- teachers experimenting with ideas and approaches themselves" (Cho, 2002, cited in GTCE, 2008, p. 7).

Chapter 4: The Contribution of School Leaders

Finding 13: School leaders are second only to classroom teachers in their influence on pupil learning and achievement.

The evidence

(i) The evidence in each part of this review, both direct and indirect, points to the key positive and negative roles played by school and system leaders in creating the conditions necessary to enable teachers who are at the heart of the business of educating pupils, to teach to their best, to make a tangible difference to the learning and achievement lives of the pupils they teach, especially those who are drawn from high need communities. The odds against them succeeding are immense. Yet it is clear that some teachers do 'narrow the gap', through their commitment, resilience, knowledge, pedagogical and relationship skills. However, they are less likely to be able to succeed without the active support of others.

(ii) There is a plethora of empirical research internationally which demonstrates the strong positive (or negative) direct and indirect influence of the school principal on pupil learning and attainment (Leithwood et al., 2006; Robinson et al., 2009; Day & Gurr, 2014). A set of 18 primary school qualitative case studies of high attainment Welsh primary schools in disadvantaged settings (James et al., 2006) provides further evidence of the important role of leadership as at the core of these schools' success.

Finding 14: School leaders improve teaching and learning most effectively through the influence of their strong sense of moral purpose and social justice and the combination and accumulation of timely, context specific improvement strategies on staff motivation, commitment and resilience, and working conditions.

The evidence

(i) Characteristics of effective leadership of this kind noted by the DfE (2009) review included:

- "an ability to combine a moral purpose and clear vision with willingness to be collaborative and to promote collaboration amongst colleagues;

- a readiness to extend the boundaries of decision making and leadership;

- making improving teaching and learning a high and visible priority;

- supporting professional development with an emphasis on classroom practice;

- using evidence – internal and external – to stimulate change and encourage staff to innovate; and

- seeking to build a community within and outside the school" (DfE, 2009, p.93).

(ii) Martin et al. (2009) noted how effective leaders, in terms of narrowing the gap in outcomes:

- "prioritise the most vulnerable and develop a local vision;

- champion the voice of vulnerable groups and encourage their participation;

- use good quality data to identify needs and provide services for vulnerable groups;

- foster partnership working around vulnerable groups;

- develop and motivate the workforce to improve outcomes; and

- have an unrelenting drive and passion to improve outcomes for vulnerable groups" (Martin et al., p. 9-17)

(iii) A range of research internationally into successful leadership in schools serving disadvantaged communities also demonstrates that school leadership had a greater influence on schools and pupils when it was widely distributed and based upon informed trust (Day & Sammons, 2013; Day et al., 2011).

Finding 15: The nature of the learning culture in schools is fundamental to improvement. Unless the head teacher demonstrates both commitment to teachers' professional development, and provides practical support it is unlikely that professional development activities will having any real effect on the teachers and the school.

The evidence

(i) The importance of high quality leadership, especially that exercised by head teachers, has for a long time been recognised as being fundamental to school improvement. Schein (1985), for example suggested that:

> "…there is a possibility…that the only thing of real importance that leaders do is to create and manage culture and that the unique talent of leaders is their ability to work with culture" (Schein, 1985).

Since then, a rich vein of empirical research on effective and successful school leadership has emerged and been developed internationally.

In Australia, Silins and Mulford (2002), in research on organisational learning in secondary schools, identified four key factors which contributed:

- a trusting and collaborative climate;

- a willingness to take initiatives and risks to improve;

- a shared and regularly monitored mission; and

- individually and organisationally oriented professional development opportunities.

Also in Australia, Lam's (2004) in-depth research in six secondary schools showed that internal school factors, supportive culture, flexible management structures, and dynamic change leadership at all levels contributed to school regeneration.

(ii) A 'best evidence' synthesis of a range of quantitative studies on effective school leadership showed that it is the promotion and active participation by head teachers in CPD which has the largest effect size (0.84) among five key dimensions of effective leadership (Robinson et al., 2009) on school effectiveness.

(iii) Recent research has shown, also, that it is not one but the accumulation over time of combinations of timely, 'fit for purpose' strategies, together with strongly held and clearly articulated values of social justice and moral purpose together with core personal and interpersonal qualities that count for success (Day et al., 2011). Collegiality, based on 'informed trust' between head teachers and staff, head teachers and parents and teachers and pupils is key to success (Bryk & Schneider, 2004).

(iv) Recent national, large-scale, mixed methods research in effective and improving schools in England (Day et al., 2011; Day & Sammons, 2013) identified the characteristics of successful school head teachers:

- **"Defining the vision, values and direction.** Effective heads have a very strong and clear vision and set of values for their school, which heavily influence their actions and the actions of others, and establish a clear sense of direction and purpose for the school. These are shared widely, clearly understood and supported by all staff. They act as a touchstone against which all new developments, policies or initiatives are tested.

- **Improving conditions for teaching and learning.** Heads identify the need to improve the conditions in which the quality of teaching can be maximised and pupils' learning and performance enhanced. They develop strategies to improve the school buildings and facilities. By changing the physical environment for the schools and improving the classrooms, heads confirm the important connection between high-quality conditions for teaching and learning, and staff and pupil well-being and achievement.

- **Redesigning the organisation: aligning roles and responsibilities.** Heads purposefully and progressively redesign their organisational structures, reconfigure and refine roles and distribute leadership at times and in ways that promote greater staff engagement and ownership which, in turn, provides greater opportunities for student learning. While the exact nature and timing varies from school to school, there is a consistent pattern of broadening participation in decision making at all levels.

- **Enhancing teaching and learning.** Successful heads continually look for new ways to improve teaching, learning and achievement. They and their staff are data informed not data led. Data are used to inform decisions about progress and further development. They provide a safe environment for teachers to try new models and alternate approaches that might be more effective. Where this is done, staff respond positively to the opportunity. It affects the way they see themselves as professionals and improved their sense of self-efficacy and job satisfaction. This, in turn, has a positive impact on the way they interact with pupils and other members of staff.

- **Redesigning and enriching the curriculum.** Heads focus on redesigning and enriching the curriculum as a way of deepening and extending engagement and improving achievement. Academic attainment is not seen to be in competition with personal and social development: rather, the two complement one another. They

adapt the curriculum to broaden learning opportunities and improve access for all pupils, with the emphasis on 'stage not age' learning. Changes to build students' creativity and self-esteem feature heavily in the curriculum, as does a focus on developing key skills for life, without neglecting the academic. There is recognition that when pupils enjoy learning, they are more effective learners. Heads also emphasise the provision of a broad range of extracurricular activities, including lunch time and after-school clubs, as well as activities during school holidays.

- **Enhancing teacher quality (including succession planning**). Heads provide a rich variety of professional learning and development opportunities for staff as part of their drive to raise standards, sustain motivation and commitment and retain staff. They placed a high premium on internally led professional development and learning, and teachers and support staff are also encouraged to take part in a wide range of in-service training, and are given opportunities to train for external qualifications. This combination of external and internal CPD is used to maximise potential and develop staff in diverse areas. Succession-planning and targeted recruitment are also adopted by effective heads.

- **Building relationships inside the school community.** Heads develop and sustain positive relationships with staff at all levels, making them feel valued and involved. They demonstrate concern for the professional and personal wellbeing of staff. The relationship between heads and senior leadership teams (SLTs), in particular, indicate trust and mutual respect.

- **Building relationships outside the school community.** Building and improving the reputation of the school and engaging with the wider community are seen as essential to achieving long-term success. Heads and their SLTs develop positive relationships with community leaders and build a web of links across the school to other organisations and individuals. Strong links with key stakeholders in the local community are seen to benefit the school.

- **Common values.** Successful heads achieve improved performance, not only through the strategies they use but also through the core values and personal qualities they demonstrate in their daily interactions. They place pupil care, learning and achievement at the heart of all their decisions" (Day & Sammons, 2013, p.16-17).

Chapter 5: Effective System-Wide Approaches: Levers for Closing the Gap

The evidence which has informed Findings 1-15 suggest that, to narrow further the attainment gap, the Welsh Government must continue in its efforts to:

- build a higher skilled, more committed and resilient school and community work force;

- ensure high quality teaching and learning, especially in the area of differentiation and assessment for learning;

- identify what works in other countries so that it can borrow, adapt and contextualise;

- establish literacy and numeracy consortia at system level, beginning with the foundation phase;

- ensure that head teacher and teacher expectations for high quality learning and achievement for all pupils are embedded in pre-service and CPD programmes and in all school cultures; and

- provide focused and coherent polices in which all stakeholders have a sense of ownership and active engagement and to which they are committed.

It is clear from Chapter 1 that considerable system-wide initiatives have been and continue to be taken in responding to these challenges. However, the evidence in Chapters 2-4 points strongly to the need for these to be combined and integrated into approaches which are multi-agency and which are led by the best head teachers, teachers and others in locally based, sustained activities that emphasize coherence, continuity and progression and are established, supported, monitored and managed at system level.

Finding 17: Engaging parents as active change agents needs to take account of the availability of time, levels of knowledge and skills, 'fit for purpose', timely support and motivations.

Levers for closing the gap in educational attainment

The review of the literature strongly suggests that to succeed in narrowing the attainment gap requires changes in culture at all levels of the education system and that there are five key levers which need to be combined: high quality teaching and learning, external system infrastructure support and monitoring, active engagement of parents and other stakeholders in

decision making, parental engagement, specialist support, high quality leadership and networks of 'champions'.

Figure 1: Key levers for closing the gap
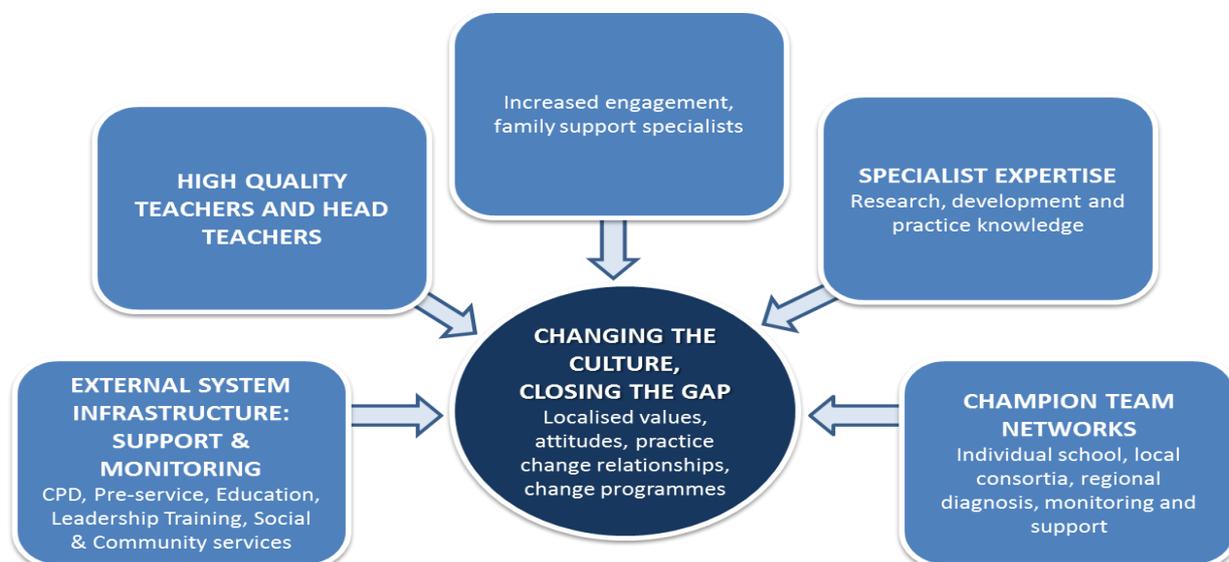
Finding 18: The recruitment of high quality teachers, dedicated to narrowing the gap through working with pupils and their families, is of particular importance for schools serving communities with high levels of deprivation, because good teaching is likely to have a greater effect on the added progress of vulnerable pupils than their more advantaged peers.

Finding 19: Successful systemic approaches to the challenge of 'narrowing the gap' suggest that the primary focus should be upon the training and development of school-based champions, teachers, senior leaders and head teachers who are committed to 'making a difference' to these cohorts of pupils and their families; that they are supported by system provided advisers at local level whose support is both skilled, context relevant, fit for purpose, intensive and sustained over time; and that the 'centre of gravity' for intervention must, over time, shift from external to internal players, providing a sense of ownership.

Finding 20: System leaders have a key role in establishing, brokering, monitoring, and providing support and challenge to these groups, identifying and disseminating good practice...tackling the variations in performance that exist between schools and local authorities (Welsh Government, 2013a).

Chapter 6: Key Messages and Recommendations

From the key findings that are summarised in the review, three persistent challenges to 'closing the achievement gap' and ten clear messages about what works were identified.

Three persistent challenges

1. **The literacy challenge:** The adult literacy figures show that this is an historic problem, tied as much to negative family attitudes to formal school education (which they see as having failed them) and to levels of economic and social disadvantage as it is to the provision and quality of teaching and learning in schools.

2. **The schooling challenge:** Teachers and schools, by themselves, are unlikely to provide easy sets of solutions, strategies or practices. What can be observed, in general, is that successful effects seem to be confined to individuals and individual institutions in particular contexts, rather than the product of whole system innovation and change. Schools serving high need communities are more likely than others to experience difficulties in recruiting and retaining highly qualified, high quality head teachers and teachers (OECD, 2008; Allen et al., 2012).

3. **The community challenge**: Narrowing the attainment gap is about more than vulnerable pupils achieving progress. Vulnerable pupils are likely to begin from a lower base because they are unlikely to be able to draw on the same levels of parental engagement, cultural and social capital during their school education. These pupils need to make relatively more accelerated and sustained progress than their more advantaged peers to close the attainment gap.

To meet these challenges means increasing the levels of engagement of parents and other social agencies working together in local, school-led teams under the leadership of high quality, dedicated head teachers and teachers who have a specific, unrelenting and exclusive focus on raising the expectations and achievement of pupils from low-income homes.

What works: Ten key messages

Message 1: High quality CPD works

However, although it is necessary it is an insufficient condition for narrowing the achievement gap in isolation (Finding 3).

Message 2: Initiatives to raise attainment of pupils from low - income families work

Initiatives work best when they are supported by targeted, evidence-informed, context-specific, intensive and long-term professional development for head teachers, teachers and teaching assistants. Models of CPD that involve head teachers, teachers and teaching assistants in analysing their practices over a sustained period are likely to result in increased commitment and improvements in practice (Findings 9-11).

Message 3: School-led CPD initiatives that involve multi-agency teams working to support schools, families and children work

These initiatives are likely to have a positive impact on pupils' attendance, behaviour and well-being and these are likely to improve attainment. They also result in improved parenting skills, parents' accessing services, and closer connections between the home, community and school. However, there are too few of them (Finding 4).

Message 4: Engaging parents and the community in planning change at the outset works

Proactive partnerships with community can have a larger and more positive effect on pupil outcomes than the effect of schooling itself (Findings 5&6).

Message 5: Developing committed and competent head teachers works

Head teachers can play a key role in creating practices in classrooms that improve the quality of learning and attainment of pupils from all backgrounds. Their schools demonstrate a combination of strong foci on academic learning, the development of pupils' social, emotional and behavioural competencies, pupil engagement and extra-curricular activities (Findings 13-16).

Message 6: The same basic curriculum knowledge, qualities and classroom skills that teachers need with all pupils works

However, because of the particular 'engagement in learning' challenges, lower levels of literacy skills and lack of social capital of many of pupils from low-income backgrounds, teachers need to be able to draw upon these in different ways and with increased levels of intensity and resilience (Findings 7&8).

Message 7: Classroom level approaches for raising the attainment of children living in

low income households work

However, they need to combine: quality literacy and numeracy teaching; promoting inspiring and challenging learning environments; peer tutoring; specialist support; formative assessment and feedback; structured group work/cooperative learning; and meta-cognitive strategies (Findings 1,2 & 12).

Message 8: Recruiting, developing and retaining high quality teachers who are dedicated to narrowing the gap through working with pupils and their families to schools serving communities with high levels of deprivation works

Evidence suggests that teachers in schools with low pupil attainment often have especially limited opportunities for CPD (Finding 18).

Message 9: Systemic approaches work

Systematic approaches work best when they have a primary focus upon establishing, embedding and sustaining groups of highly skilled, local and multi-agency champions who are school-based and who are committed to 'making a difference' to pupils and their families (Finding 19).

Message 10: System leadership works

It works best when system leaders broker, monitor, and offer support and challenge to local key stakeholder groups who are engaged in tackling the variations in performance that exist within and between schools (Findings 17&20).

Three recommendations

1. Local school-based action strategies will need to be designed and implemented by knowledgeable, morally driven, committed and skilled school leaders who recognise that change needs to be supported and monitored by a number of in-school 'champions' of best practice who themselves will need to be coached, mentored, monitored and assessed by regional teams. The success of the work will need to be judged by a series of evidence based indicators of pupil progress and achievement and planned to be developed over a five year period with different cohorts of pupils in Foundation, Primary and Secondary schools.

2. This will require targeted, ring fenced resources. It may be that a carefully defined number of time limited pilot schemes be established within a whole nation strategic plan. The pilots may, for example, be located in rural and city communities, which are identified as representing the most complex improvement challenges and thus representing the

highest priority. Beginning with the areas in most need is likely to enable further successful 'up-scaling or 'spread' to others.

3. Change models need to be designed to ensure the movement over time from high external resource dependency to low or no external resource dependency i.e. towards self-improving, self-sustaining models. These can best be achieved through a mix of local consortia, lead schools and individual senior school based staff charged with leading change processes that are research and evidence informed. These might be the 'inner ring' of change facilitators, working closely with parental services. The outer ring of centralised support and monitoring services should ensure that pre-service programmes enable the provision of specific training for cohorts of teachers who are dedicated to the cause of narrowing the gap, and that schools provide them with initial experience. At the same time, the specialist literacy and numeracy teachers need to be targeted, especially in relation to their teaching of at risk children and young people. Parents also need to be incentivised to provide support from an early age.

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Annex: Six Examples of System Level Initiatives

Example 1: The Effective Pre-school and Primary Education Project

Findings from a longitudinal Effective Pre-school and Primary Education project in England, reported in Sosu and Ellis (2014, p.27), suggest that high-quality preschool is "essential for children from disadvantaged households in closing the attainment gap," and that, '"they have, 'positive relationships between staff and children, clear learning objectives, an explicit focus on language, pre-reading, early number concepts and non-verbal reasoning, and well-qualified staff".

Example 2: The Extra Mile Project

The Extra Mile project (Chapman et al., 2011), which involved primary and secondary schools in some of the most deprived wards in England, focused on the perceived cultural barrier of low aspirations and scepticism about education that prevents some disadvantaged pupils from succeeding at school. It identified, encouraged and supported effective school-based actions with the aim of reducing within-school variations and spreading good practice between schools, and so help to raise the aspirations and attainment of disadvantaged pupils.

"School Standards Advisers from the Department for Education visited 50 secondary schools in 2007 which were identified as "bucking the trend" by achieving high results despite having an intake from some of the most disadvantaged wards in England (as defined by FSM eligibility). In 2008, a similar investigation was conducted in 45 primary schools. The Advisers identified 12 common activities for secondary schools and seven common activities for primary schools which appeared to be particularly successful in raising aspirations and attainment. These were developed into guidance documents for primary and secondary schools, with the aim of seeing if other schools, with similar intakes, could adopt some of these activities with the same success.

The seven key activities for primary schools	
1	Providing a coherent curriculum with a strong focus on speaking and listening
2	Engaging pupils in their learning
3	Helping pupils to articulate and manage their emotions
4	Broadening pupils' horizons by providing a wide-range of stimulating activities
5	Providing support at transition points
6	Recruiting, developing and retaining staff with empathy for the pupils and their backgrounds

7	Promoting and valuing partnerships with parents/carers and the local community
The twelve key activities for secondary schools	
1	Increasing interactive and participatory learning
2	Developing a listening campaign which responds to pupil and parent perceptions
3	Promoting a culture of respect for local people, local culture and local values
4	Broadening pupils' horizons by offering experiences and opportunities with which they would not otherwise be familiar
5	Developing a culture of 'achievement' and 'belonging' in schools
6	Offering a more relevant curriculum
7	Building pupils' repertoire of spoken and written language
8	Developing pupils' social, emotional and behavioural skills
9	Cultivating traditional values of respect, good behaviour and caring
10	Tracking pupil progress and intervening promptly if they fall off trajectory
11	Developing effective rewards and incentive schemes
12	Supporting pupils at important moments in their lives, especially transition points

Schools involved in the Extra Mile project were assigned a School Standards Adviser. The Adviser visited the school on a regular basis (approximately once per term) to meet with key people involved in implementing the project and offered ongoing telephone support. The role of the adviser was to provide critical friendship and monitor progress against an action plan.

The Extra Mile evaluation (Chapman et al., 2011) found a positive impact on pupil attainment as a result of taking part in the project. There was a significant difference between the GCSE points scored between pupils taking part in Extra Mile activities and a matched sample of those not taking part in Extra Mile activities" (Chapman et al., 2011, p. 6-7).

Example 3: The London Challenge Programme

The London Challenge (2003-11) set out to ensure every young person in London received a good, or better, education. In an interview with the Guardian in 2013, Sir Mike Tomlinson, the programme's chief adviser, summarized its purposes and successes:

> "The London Challenge had a simple moral imperative: to have every young person
> in London receive a good, or better, education. Along with additional funding, a

minister with specific responsibility for London schools was appointed. These two factors, supported by a single policy objective and a first-class team of officials in the Department for Education, gave the project a head start.

The key components of the London Challenge were a close focus on raising the quality of school leadership and on the quality of teaching and learning. This focus was achieved through a leadership training programme for existing and aspirant leaders, and professional development and support for teachers seeking to improve their teaching. Another important part of the London Challenge was the detailed use of data, not only about the school overall but about the performance of individual subject departments and of students from ethnic groups.

The data was used to create "families" of schools with common characteristics. This enabled the London Challenge advisers to make clear to schools that their performance could not be defended on the grounds of being different in some way from every other school: there was no hiding place.

A highly experienced team of advisers was appointed to support schools and LAs and to act as their first point of contact for monitoring improvements and seeking financial or other help. The support for each school was tailored to its needs and modified as those needs changed or became fewer. The whole language of the project was positive, with the schools most in need of improvement and the support programme being called 'keys to success'" (Guardian, December, 2013)

The performance of London schools after the London Challenge improved dramatically, with Key Stage 4 results moving from among the worst in the country to the best during the period (Kidson & Norris, 2014). Ofsted (2010b) reported that London had a higher proportion of good and outstanding schools than any other area of England. Kidson and Norris (2014) considered the programme's success was due to: a combination of experimentation on the ground, rapid feedback and learning by advisers and officials, and strong project management across different strands of the policy. Over time, the centre of gravity for intervention shifted towards the teaching profession itself, with increasing ownership by senior practitioners driving sustainable improvements.

Example 4: The City Challenge Programme

Sosu and Ellis' report (2014) found similarities in principles between the London and City Challenge programmes in Manchester and The Black Country but differences in implementation.

"For instance, in London there was a strong emphasis on the use of data. Comparative data from collaborating schools was published to track progress and

guide decision-making. In Manchester and the Black Country, collaborative activities between schools did not necessarily involve making comparative data available to guide decisions and activities. Additionally, while the London Challenge was focused on supporting collaborating schools to improve pupils' attainment levels, programmes in the City Challenge were ambitiously aimed at improving performance across broad geographical areas. This meant that unlike in London, programmes in Manchester were very thinly spread and schools had limited involvement. Finally, while London Challenge had specified sets of activities for schools involved in the programme, the inbuilt context-specific flexibility of the City Challenge meant that there was no specific guidance provided for schools and schools used the funding in different ways'"

They found, also, that:

"Evaluation of the City Challenge programme revealed different degrees of success in the primary and secondary sectors, and in the geographical areas. Between 2008 and 2011, the attainment of primary school pupils eligible for free school meals (FSM) in participating schools increased by more than the national figure in all areas, London, Manchester and the Black Country. However, whereas the attainment gap between those eligible for FSM and their wealthier peers in London was narrowed by 3.5% (a stunning result compared with the national average of 2.2%), and was also narrowed in the Black Country, this was not the case for Manchester primary schools. For secondary school attainment, results between 2008 and 2011 showed an increase in attainment levels of secondary pupils on FSM in all three City Challenge areas. However, only in London did this increase exceed the national figure to narrow the attainment gap between rich and poor by about 2% (compared with the national average of 0.3%, another stunning result for London)" (Sosu & Ellis, 2014, p.36-37).

Example 5: The National Strategies Programmes

The National Strategies were professional programmes providing interventions and matching resources designed to support improvements in the quality of learning and teaching in schools, colleges and early years settings in England. The key aim was to help them in raising pupils' standards of attainment and improve their life chances. A wide range of programmes between 1997 and its demise in 2011 were provided, including:

- "the Early Years Foundation Stage (EYFS) framework and materials, with a particular focus

on supporting the narrowing of gaps in early years outcomes;

- the development of systematic synthetic phonics through the Communication, Language and Literacy (CLLD) programme;

- improved pedagogy and subject knowledge in the core subjects of primary and secondary English and mathematics, and in secondary science;

- improving attainment and progress of the lowest-attaining 5% of children in primary schools through the Every Child programmes;

- primary programmes such as the Improving Schools Programme (ISP), which was originally targeted at schools below floor targets but was later extended as a bespoke support to a wider range of schools;

- support for secondary schools below floor targets;

- the School Improvement Partner (SIP) programme; and

- behaviour and attendance, including the …… Social and Emotional Aspects of Learning (SEAL) programme" (DfE; 2011, p.2-3).

From 2009, the National Strategies worked specifically to make closing achievement gaps the responsibility of every teacher in every classroom. Training materials were developed, including case studies of what works, for example, with disadvantaged, low performing White British pupils. It claimed to be successful in narrowing the attainment gap for pupils entitled to free school meals between 2006 and 2010 by 0.8% points (The National Strategies, 2011); and Ofsted (2010a) reported that 'The National Strategies have contributed to a national focus on standards and have helped to focus teachers and others on discussing and improving teaching and learning'.

However, when viewed against nationally determined targets, the overall improvements in standards and progress were deemed 'too slow' which Ofsted attributed to a weakness in the provision of support, too many centrally driven initiatives and too much monitoring which, taken together, overwhelmed schools.

Example 6: Building learning environments through schools, parent and community collaboration

It is essential that parents and the community are actively engaged in the learning of their children. The examples below, taken from the OECD (2013) Report on "Innovative Learning Environments", are just two of the many examples that show how some schools have made a

particular effort to strengthen their links with parents and the larger community in order to foster the general learning community around the student.

"The Jenaplan-Schule (Thuringia, Germany) requires and counts on the active co-operation of parents. Monthly round table meetings give parents the opportunity to discuss group-specific problems with the teachers. Regular discussions and consultations between parents and teachers help support the child's individual development. Parents are invited to get involved in classes, and they can also help with the design and management of classrooms, learning materials and the school building. The school also encourages parents to co-operate with other parents and their children outside of the classrooms in teams. This parent involvement led to a newspaper called the "Parents Circle" being published by parents to inform the wider public about the school's directions and activities.

The Colegio Karol Cardenal de Cracovia (Chile) is located in one of the poorest neighbourhoods in Santiago and offers a wide range of activities to parents. Parental participation is fundamental. The principal declares that parents are not "clients", as can be the case in some schools in Chile, but are active partners. Many parents and guardians say that one of the reasons why they sent their children to this school was the diverse group of activities that the school offers to their parents. As one parent said, "for example we celebrate Mothers' day, the Children day, the day for the Show Searching for a Star, and then these activities become well known and create a special buzz about the school. The parents get to understand that here they are listened to". Another parent said proudly, "I am a Karol mom" (OECD, 2013, p.140-141).

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