

Centre for Research on the Wider Benefits of Learning Research Report

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Influences and leverages on low levels of attainment: a review of literature and policy initiatives

Kathryn Duckworth, Rodie Akerman, Leslie Morrison Gutman and John Vorhaus



**Centre for Research on the
Wider Benefits of Learning**

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**INFLUENCES AND LEVERAGES ON
LOW LEVELS OF ATTAINMENT:
A REVIEW OF LITERATURE AND
POLICY INITIATIVES**

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Executive Summary

Introduction

The Children's Plan (Department for Children, Schools and Families, 2007a) sets out how the government will meet its strategic objectives for children, schools and families. The values underpinning these objectives include excellence and equity; these demand that no child should receive less than the highest quality education, or achieve at levels that fail to fulfil their full potential. However, despite the clear policy commitment, there remain a significant number of low attaining pupils. We need to understand both the influences on low attainers in particular, and how policy can intervene to raise their attainment levels.¹ Hence this review of literature on influences and leverages.

The review explores the influences on progress and attainment in early and middle-childhood, adolescence and early adulthood. We provide an overview of analyses which compare the importance of individual, institutional and external factors as these relate to low achievement, particularly amongst 14-19 year olds.

The review is not exhaustive, and does not attempt to duplicate reviews of literature on low achievement in schools. Rather, we synthesise the evidence on key factors associated with achievement, summarising their amenability to policy intervention. The factors contributing to low educational achievement are many and complex, and, owing to their often intricate interaction, it is not always possible to determine whether one factor is causing or being caused by another.

There is some controversy over what constitutes 'low attainment'. Cassen and Kingdon (2007) provide a usefully broad definition, comprising four measures:

- No passes at GCSE (or equivalent)
- No passes at GCSE (or equivalent) above grade D
- Not getting a pass in at least one of English or mathematics
- Not getting at least five passes of any grade including English and mathematics.

Key findings: overview

Influences on attainment: characteristics of individuals

- In terms of raw attainment, compared with others, boys, minority ethnic groups, children from low socio-economic backgrounds and children with poor home learning environments do substantially worse on average. However, there are complex interactions between these characteristics and

¹ In this report we use the terms 'attainment' and 'achievement' interchangeably.

when other factors are controlled for many minority ethnic groups have relatively better performance than White British children, on average.

- The most significant indicator of achievement is prior attainment, but there are sizeable differences between groups: White British children are most likely to remain low achievers if they start from that position, and they are least likely to remain high achievers.

Influences on attainment: characteristics of the school environment

- Students make less progress in schools with a high proportion of boys, students entitled to free school meals (FSM), students with English as a second language and schools with a low average baseline of achievement.
- Going to a good school or pre-school can have a beneficial and lasting influence on attainment, and primary school has more impact on eventual outcomes than secondary school.

Policy approaches to raising attainment

- Successful approaches to raising low attainment include: personalised approaches to teaching and learning; programmes to raise aspirations; the provision of incentives to stay in education beyond the age of 16; supporting the development of a good home learning environment; and targeted support in school.
- There is little or insufficient evidence to suggest that, considered separately from other measures, assigning more resources to schools, or reducing class sizes has a substantial effect on attainment – the impact largely depends on how those resources are used.
- The evidence for setting and streaming having a positive effect is far from robust, and there is some evidence that the effect on low attainers is often detrimental.
- On structural changes to provision, including Academies and Specialist Schools, and on support for local delivery, including Excellence in Cities and City Challenge, the evidence is generally positive, but more mixed as compared with evidence on the other approaches we discuss.

The positive changes associated with many initiatives clearly emerge only after an extended period of time. For example, the first large-scale evaluation of Excellence in Cities (EIC) found limited effects, but the second evaluation found that, on average, students in EIC schools were making more progress at Key Stage (KS) 4 than other students.

Approach and structure

We first provide a critical analysis of the different factors that influence low educational attainment, and identify the questions that remain in dispute, based on a review of the literature on the individual, family and school-level factors associated with attainment. For the areas of influence defined, we then review some of the policy initiatives attempting to improve standards for low attaining young people, and summarise the evidence on the extent of their impact.² We conclude by summarising the evidence, reviewing its limitations and examining the implications for policy design.

Findings: influences on low attainment

The individual

Prior attainment

1. Continuity in cognitive attainment is a well established phenomenon in development research: children's achievement test scores are strongly related to prior cognitive functioning and levels of literacy and numeracy and there are strong and persistent links between attainment in primary school and GCSE results nine years later.
2. Prior attainment is the strongest predictor of later academic performance. It is thus common for children who are low attainers early on to fall into a pattern of low attainment throughout their school life, increasing their chances of social exclusion in adulthood.

Gender

3. Girls are approximately 10 percentage points more likely to achieve five or more A*-C grades at GCSE than boys. This gender imbalance is not confined to GCSEs; it is evident at most stages in the educational system, typically emerging during primary school and widening as children move to secondary school.
4. There are approximately three male low achievers for every two female low achievers, when low achievement is defined as 'No passes above grade D' or as leaving school without at least five passes including English and mathematics.
5. The introduction of coursework into GCSE examinations may help to explain the widening gender gap between 1986 and 1998, since it coincides exactly with girls' performance overtaking that of boys at 16; boys tend to be favoured by multiple-choice questions and girls by essays and coursework.

² While we acknowledge that there are initiatives which, though not having 'raising attainment' as their overriding objective, may have a significant impact on attainment levels (for instance those aimed at improving child health, reducing child poverty, and improving parenting skills), we confine our review to those initiatives which have a stated major aim of raising levels of attainment.

6. The few studies that look at whether some schools are more effective for one sex or the other find no discernable differences between observable school characteristics and gender differences in attainment.

Ethnicity

7. The mean score in KS3 assessments in English, mathematics and science for Pakistani, Bangladeshi, Black Caribbean and Black African groups are all substantially below the mean for White British pupils. This difference is equivalent to more than one year of progress in terms of National Curriculum levels.
8. However, when background factors such as neighbourhood disadvantage and FSM status are controlled for, Bangladeshi, African and Caribbean pupils show a greater performance advantage over White British pupils and are more likely to avoid low achievement.
9. Many ethnic groups make stronger educational progress during the KS4 period – Years 10 and 11 – than they do during KS3 – Years 7, 8 and 9. Black African and Bangladeshi pupils have caught up with the White British group by the end of KS4, and Indian pupils only marginally ahead of White British pupils at KS3 are substantially ahead at the end of compulsory schooling. At KS4, the mean score for Black Caribbean pupils remains significantly lower than the mean for White British pupils.
10. Mobility out of low achievement – progress from KS2 when pupils are age 11 to KS4 – varies greatly by ethnic group. The White British group have the highest risk of remaining in the lowest 10 per cent of the achievement distribution if they start there. They are also less likely to retain ‘continuing high achievers’ status – staying in the top 10 per cent at KS4 given this position at KS2 – than Bangladeshis, Indians or Pakistanis.

Aspirations

11. Teenage aspirations often predict future attainment both in occupational and educational spheres. From the Longitudinal Survey of Australian Youth (LSAY): intentions to leave or complete school formed early in secondary schooling are significantly related to participation in the latter years of schooling.
12. Aspirations may have an independent effect on later attainment, separate from other influences. From the Longitudinal Study of Young People in England (LSYPE): the aspirations of young people (aged 14) to stay in education beyond the age of 16 boosted their national test scores by an additional 1.6 points (i.e., equivalent to one and a half terms of learning) compared with those young people who did not have such aspirations. The effect was still present, although reduced, when controlling for prior attainment.
13. High aspirations do not always predict high attainment among some minority ethnic groups. Black African and Black Caribbean pupils, for example, have higher aspirations than White British pupils, but they have lower attainment.

The family

Socio-economic background

14. Higher achievement is negatively associated with economic and social disadvantage; children growing up in more disadvantaged families perform, on average, less well than children born into more advantaged families. This becomes evident before children enter school, and is exacerbated as pupils progress through the education system: pupils eligible for FSM fall further behind non-FSM pupils at each Key Stage.
15. The most recent data based on GCSE results from 2007/08 show that of pupils in the most deprived decile, 29.4 per cent achieved five or more A*-C GCSEs including English and mathematics (and equivalent), compared with 70 per cent of pupils in the least deprived decile.

Home environment and parental involvement

16. Positive, consistent and engaged parenting styles have an impact on children's development. Supportive family relationships and secure attachment in childhood act as sources of resilience in the face of social or economic disadvantage in adulthood.
17. Parents' educational behaviours with their children are important for their cognitive development, particularly during the early years, having a significant and independent influence on attainment at age three, as well as at entry to primary school. Studies also show that children whose homes offer a more stimulating learning environment (measured at age 8) have a higher academic intrinsic motivation between the ages of nine and thirteen.
18. Home learning environment and the nature of parental involvement may have a greater influence on child achievement outcomes than variation in school quality.

Parental aspirations

19. There are strong associations between teachers' assessments of the interest in learning of their students' parents and the attainment of children. Growth in attainment between the ages of 11 and 16 is related to the parents' interest in their child's education, as rated by teachers when that child was age seven.
20. Parental aspirations are key factors in the attainment of young people, perhaps even more important than other family and parent characteristics. Recent studies indicate that parental aspirations may have a greater effect on national test scores than other parental variables such as health, values, and involvement in learning.

The school

School characteristics and composition

21. Children attending higher quality or more effective pre-school settings show better educational outcomes in mathematics and reading at the end of Year 5 (aged 10). Children attending low quality pre-school settings do not show the

same continued gains. Attending a good quality primary school can offset the potential negative influence of going to a less effective pre-school.

22. The impact of primary schools on students' attainment at age 16+ is likely to be substantially larger than the impact of their secondary schooling.
23. Value-added analysis of primary school data suggests that, on average, students make more progress in schools with a high proportion of girls, and less progress in schools with a high proportion of students entitled to FSM, and a high proportion of students with English as a second language. In general, the differences between these groups tend to increase, rather than decrease, over time.
24. The question whether single-sex schooling has any impact on academic outcomes remains contested. However, single-sex schooling is positively linked to the attainment of qualifications in 'gender atypical' subject areas for both girls and boys. Girls who attended girls' schools are more likely to achieve more mathematics and science passes than co-educated girls, and boys in boys' schools more passes in English and modern languages.

Ability grouping, resources, class size

25. Much of the evidence suggests that the effect of ability-grouping on pupil attainment is limited and no firm conclusions can be drawn from the use of this strategy in schools. Indeed, there is some evidence to suggest that placement within low-ability groups has a negative impact on pupil attitudes to school and motivation, while students assigned to high-ability streams do better than in mixed-ability groups. Thus ability-grouping practices may widen gaps in attainment.
26. A large body of research fails to find evidence that giving extra money to schools makes a difference to overall levels of pupil attainment. While some studies show an association between higher levels of expenditure per pupil and higher levels of achievement there are difficulties in establishing a causal relationship between the two.
27. Much of the UK evidence reports little or no impact of class size; those class size that do exist are most marked in the first years of school.

Leverages on low attainment

Aspirations

28. Aimhigher encourages young people to aspire to university, and includes partnerships of schools, universities and other institutions targeting young people from backgrounds under-represented in higher education. The evaluation of Aimhigher: Excellence Challenge, a programme now incorporated into Aimhigher, found that participation in the programme was associated at KS3 with an improvement of 4.6 percentage points in the proportion of Year 9 students attaining levels 4, 5 or 6 in mathematics, and at GCSE with an improvement of

2.5 in total points score. Qualitatively, the evaluation found that visits to universities provided a transformative “moment of vision”, enabling young people to “make a conceptual leap about their ability to function in such an environment”³.

29. The provision of a learning mentor for young people in low-performing schools is also significant: they were one and a quarter times more likely to attain five or more GCSEs at grades A*-C than those in similar schools without a mentor.
30. Education Maintenance Allowance (EMA): all young people in England are entitled to claim the EMA for up to three years after they finish compulsory education. If they live in a household with an income of £30,000 or less, they receive £10, £20 or £30 per week that they remain in education. This provides an incentive through which the education system aims to increase people’s aspirations and engagement with education.
31. The pilot programme was found to have increased participation in education at age 16-17 by 5.9 percentage points, while students receiving the EMA were more likely to stay in their courses than similar students not receiving the allowance, with those from the most deprived areas achieving at higher rates than their peers. It was estimated that just over half of those staying on in education and receiving the EMA would otherwise not have been in education, employment or training, possibly indicating an increase in their aspirations.
32. The allowance had measurable effects on achievement: for both males and females, average A Level performance at age 18-19 was improved by around 4.5 per cent, with the effects being concentrated among young people from the most deprived backgrounds.

Gender and ethnicity

33. Successful strategies for closing gender gaps involve intervening early (such as through the Every Child a Reader programme) and engaging with students’ own interests and giving them adequate teaching and learning options in reading and writing. Whole-school strategies for raising boys’ achievement include praise and rewards for achievement, giving students a voice and valuing their opinions, and having a school ethos that expects boys to achieve and in which gender stereotypes are minimised.
34. Interventions such as the Black Pupils’ Achievement Programme, and the Aiming High: African Caribbean Achievement project, aim to help schools develop a whole-school approach to raising the achievement of African Caribbean students. Strategies include monitoring achievement, developing more inclusive curricula, instituting training on race equality and African Caribbean students’ needs, and introducing mentoring programmes.

³ Aimhigher Practitioner website. Aimhigher Excellence Challenge: Key Findings. www.aimhigher.ac.uk/sites/practitioner/programme_information/monitoring_and_evaluation/archive/aimhigher_excellence_challenge.cfm Accessed 07.04.2009.

35. Evaluation found evidence that results had improved for African Caribbean students in Aiming High schools, and that there was some closing of the gap in performance. Mentoring was found to be an especially effective strategy for improving achievement. The evaluators recommend that schools should target support at African Caribbean students in KS1 and KS2, and that this should be coordinated throughout all Key Stages.
36. The impact of any intervention can vary significantly, depending on the individual beneficiaries, as illustrated in the case of the EMA. Whilst there was generally a positive effect on attainment, this varied by gender and ethnicity, as well as level of deprivation and prior attainment. The impact on participating in education at age 16 is concentrated among White males and females, for whom participation in the pilot areas rose by 2.9 and 2.4 percentage points respectively. In comparison, there are no statistically significant impacts on the participation of Asian or Black students. However, the attainment of young people from ethnic minorities increased significantly in the pilot areas, particularly in the case of Black females. While both males and females in relatively disadvantaged areas had higher rates of participation and attainment, the results were weaker for males in the most deprived areas.

Home environment

37. Parenting support has most notably been available through Sure Start Local Programmes, now Sure Start Children's Centres. As well as providing childcare, these settings also offer parenting workshops and advice, in order to enable parents to build a good home learning environment.
38. National Evaluation of Sure Start, 2008: parents in Sure Start areas provide children with a better home learning environment and a warmer parenting style than those in other areas, and their children demonstrate better levels of independence and ability to regulate their own behaviour.
39. The extended schools initiative is multifaceted, and includes help, advice and links with support services for parents, as well as providing extra activities for children. Evaluation of Full Service Extended Schools indicates that a school's participation in the initiative is positively associated with pupil attainment, although these links are not so straightforward as to mean that a pupil attending an extended school will have higher attainment than one who does not. There were also positive associations with a range of other outcomes including family stability, helping families to manage their problems, and adult learning.
40. Family-Nurse Partnerships offer regular home visits by a nurse to vulnerable young parents from before birth to when the child is aged two. This programme is based on a US model that has been thoroughly evaluated with randomised controlled trials. The evaluation found benefits that persist until the child is aged at least 9, including higher achievement in school, and benefits for the mother, including longer intervals between births of first and second children, longer relationships with partners and less reliance on state welfare support.

Parental aspirations

41. The evaluation of Aimhigher: Excellence Challenge found evidence that “parents are a potential for leverage even among young people in low performing schools”. Young people in Year 9 were twice as likely to consider higher education if they believed their parents wanted them to stay in education. When parents expressed an interest in their children continuing in education, attended parents’ evenings, and encouraged their children to talk about university, this was associated with an increase of around 12 percentage points in the probability of the children aspiring to university. Opportunities to discuss life at university with their family were associated with young people being over one and a half times more likely to aspire to higher education.

Schools: area-wide approaches

42. London Challenge was launched in 2003, aiming to bring about a sharp drop in the number of the capital’s under-performing schools, and achieving significant improvements in educational outcomes for disadvantaged children. The initiative offers support for some schools in challenging circumstances, more intensive support for five key boroughs, help with teacher recruitment and retention, leadership programmes, out-of-school opportunities for students, data tailored to London’s needs, and programmes for underachieving groups and weak subject areas.
43. Evaluation in terms of attainment shows mixed, although largely positive, results; it concludes that overall, London schools have improved “dramatically”. They have improved faster than schools in other areas of the country, and London Challenge areas are doing better than other London areas in the Contextual Value Added (CVA) score, which measures students’ progress in comparison with similar students. No schools in London Challenge areas were significantly below the national CVA rate, and 67 per cent were significantly above it.
44. Excellence in Cities (EIC) ran from 1999 to 2006, using partnerships of schools and local authorities to raise standards in deprived areas. An evaluation found that EIC closed the gap in attainment between deprived and non-deprived students at school-level, but not at the individual level as measured by eligibility for FSM.
45. The most positive changes associated with the initiative emerged over extended periods of time. The first large-scale evaluation found limited effects, but the second evaluation found that, on average, students in EIC schools were making more progress at KS4 than other students.

Specialist Schools and Academies

46. Evaluations are mixed. The most recent reporting (Smithers and Robinson, 2009), which focuses on Specialist Schools with a science focus, found that Specialist Schools “add more value than non-specialist schools, but since adding value is part of the approval process [for gaining Specialist status] they would have been the more effective in the first place.” The report quotes an earlier review from 2006, which found that “the majority of specialist schools are highly effective”,

but, “whether this is due to their selection practices (overt and covert), or to being already highly effective in order to obtain specialist status is not clear”. The 2009 report repeats the earlier review’s conclusion that “there is no proven link between the improved performance of these schools and their specialist status”.

47. Curtis (2008) finds that Academies are not doing enough to work with other schools in their area. On the other hand, PricewaterhouseCoopers LLP (2008c) finds “no strong quantitative evidence that changes in the profile of Academy students have been at the expense of [schools with an overlapping intake of students]”, and that standards in Academies are rising at a faster rate than the national average and in comparison schools.

Community based approaches

48. The aim of New Deal for Communities (NDC) is that within 10 to 20 years nobody should be seriously disadvantaged by the area in which they live, neighbourhood deprivation being tackled through local partnerships set up to address a wide variety of contributory factors.
49. Evaluation of the programme between 2002 and 2004 found that educational attainment in NDC areas improved slightly, but that this was in line with comparator areas. The report suggests success factors for educational approaches, including employing local people in projects designed to raise attainment. Between 2002 and 2005, while general improvements in NDC areas appeared to be changing at a similar rate to their ‘parent’ local authorities, the proportion of children achieving five or more GCSEs at grades A*-C increased by three percentage points more in NDC areas than the parent authorities.

Conclusions

In summary, there is convincing evidence that individual characteristics and family background (gender, ethnicity, socio-economic status) have a significant and sustained effect on achievement, impacting from the earliest years. However, while the most significant indicator of achievement is prior attainment, academic trajectories are by no means fixed, and there are sizeable differences between groups: for instance, White British children are most likely to remain low achievers if they start from that position, and they are least likely to remain high achievers. Progress can also vary depending on the characteristics (quality and social composition) of school and pre-school environments.

This suggests that while there are some fixed factors which may act to disadvantage some children, their effects can be mitigated with appropriate support and there is potential to improve the achievement of many low attainers.

The fact that there are many influences on attainment suggests that improving the attainment of low achievers has to be approached from more than one direction.

Successful approaches to raising low attainment include: raising aspirations (of both parents and children) through programmes; the provision of incentives to stay in education beyond the age of 16; supporting the development of a good home learning environment; and targeted support in school.

However, not all approaches are equally successful and there are some strategies for which evidence of positive impact remains weak: for example, investment of additional resources alone appears not to have a sizeable impact; the impact largely depends on how those resources are used. The evidence for setting and streaming having a positive effect is also far from robust, and there is some evidence that the effect on low attainers is often detrimental. On structural changes to provision, including Academies and Specialist Schools, and on support for local delivery, including Excellence in Cities and City Challenge, the evidence is generally positive but more mixed as compared with evidence on the other approaches we discuss.

The nature and multiplicity of efforts to address low attainment can make them difficult to evaluate: initiatives may target different groups of pupils, or the same schools and children may be affected by more than one initiative at the same time making it difficult to incorporate rigorous controls and disentangle effects arising from different policies. It is also the case that effects may in some cases only manifest themselves over a considerable period of time, while the fast pace of the policy cycle often demands the rapid production of measurable results, with the result that early evaluations do not always capture the full effects of the policy under test. However, within these limitations we can identify some general principles surrounding policy development:-

- Targeted initiatives may be more successful than universal approaches. However, targeted approaches also generate significant practical difficulties; for example, initiatives targeted at deprived areas may be adopted most enthusiastically by families who are not deprived within those areas. More specific targeting (e.g. at individual level) or additional measures to ensure take-up by those in most need may therefore be necessary. Targeting support also means that there is greater potential for stigmatisation, an issue which needs to be carefully handled as where stigmatisation is avoided the effect is often higher levels of engagement, and an improvement in the effectiveness of provision.
- The number, complexity and interaction of factors that account for low attainment, including factors that are sensitive to region and locality, argue for a role for initiatives that allow for a measure of flexibility according to local circumstances. One such approach would be the use of school coordinators to champion achievement for groups at risk of low attainment, and incorporating objectives for raising the attainment of low achieving groups into performance management for senior managers.

However, the complexity mentioned above also means that some initiatives may have unintended consequences; for example, the emergence of a market in education may lead to an overall average rise in education standards as intended, but may also contribute to a widening gap between the highest and lowest levels of attainment.

Finally, the significant and long-lasting effects of early influences and parental aspirations for their children on attainment and motivation for learning suggests that providing support for parents at these early stages may be particularly beneficial for children in both the short term and at later periods in their lives.

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Introduction

In 2008, 15.5 per cent of 16 year olds (approximately 94,000) left school without any GCSEs higher than a grade D. This included around 10,000 teenagers who failed to gain any qualifications at all (Department for Children, Schools and Families [DCSF], 2009a). Despite improvements at all Key Stages since 1997, there continue to be difficulties in bringing the performance of the lowest attaining children closer to that of their peers. Consequently, improving the outcomes of low achievers remains top priority in order that all children and young people are able to achieve their full potential and are given the resources to lead happy, successful and productive lives in adulthood.

While low achievement is strongly associated with social background and disadvantage, it is not universally so. Nearly half of all low achievers are White, British boys, but many children and young people from the same backgrounds succeed and confound expectations. Moreover, while social and economic circumstances are the most important factors in explaining test results, schools do make a difference to educational outcomes and can offset experience of other poor quality contexts, such as impoverished home environments and pre-school settings (Duckworth, 2008; Melhuish *et al.*, 2006; Sammons *et al.*, 2007).

The factors contributing to low educational achievement are many and operate in complex and multifaceted ways, but some clear main factors are emerging from the wealth of research in this area. Children and young people are known to move in and out of risk over the course of compulsory schooling (Feinstein and Sabates, 2006; Sacker *et al.*, 2002; Schoon *et al.*, 2002) and thus while the early years are known to be particularly important in setting the stage for later development and school adjustment, there is also value in continued investment and intervention in adolescence. Yet there is a growing recognition that the search for a “magic bullet” to improve overall attainment and narrow the gaps in outcomes between disadvantaged children and the rest is misguided; hence, a clear understanding of the factors known to influence attainment and their amenability to policy intervention is essential.

This report builds on the considerable quantitative analyses that exist in social science, exploring the influences on progress and attainment in early and middle childhood, adolescence and through into adulthood. The aim of the report is to provide a coherent picture of the many published analyses which compare the importance of individual, institutional and external factors as they relate to low achievement in 14-19 year olds, recognising that children and young people move both in and out of risk as they grow up, and that differences exist between individuals and their experiences. (Since young people are influenced by earlier events, the report also considers some material relating to younger age groups.)

The review is not intended to be exhaustive and does not attempt to duplicate the many excellent reviews of literature on underachievement in schools (for example West and Pennell, 2003), on the determinants of attainment (Haveman and Wolfe, 1995) and on the value of education (Machin and Vignoles, 2005). Rather, the aim is to provide a synthesis of evidence on the key factors associated with achievement, summarising their amenability to policy leverage and situating them within a context of strategic government thinking, and the role and application of that thinking in a variety of policy initiatives.

The remainder of this report is structured as follows: in Part I, we discuss some of the different conceptualisations of low achievement, providing a profile of overall attainment in England and who low achievers are; Part II provides a critical analysis of what is known about the different factors that influence low educational attainment as well as what remains disputed. This section of the report reviews the literature on the various individual, family and school level factors associated with attainment, outlining, where relevant, the ways in which their influence differs according to the measure of low achievement used. We also discuss some of the methodological difficulties in disentangling the importance of some associations and in isolating causal relationships. In Part III of the report, we review some of the policy initiatives attempting to improve standards for this group of young people, with the evidence of their impact. In the concluding section, we draw the review of literature and the policy discussions together and summarise the extent to which these factors are likely to be amenable to intervention.

Part I: What is low attainment?

The issue of ‘low attainment’ is a subject that has increasingly aroused the interest of researchers and policy makers as well as those working across ages and stages of the education system. The focus of debate here has varied somewhat over the years, but has one constant feature, namely that at any given time there is concern that a particular group of students is failing to achieve their full potential. At times this concern has centred on the achievement of working class students or that of girls or, more recently, boys. At other times greater attention has been placed on the performance of those from particular ethnic groups or those from very disadvantaged backgrounds. Recent years have also seen increased interest in a new group: those at risk of social exclusion, particularly as a result of poverty (West and Pennell, 2003).

Empirical investigation has examined the factors associated with low achievement at different points through the school years, the nature of change and stability in low achievement and its long-term consequences. Findings from this large body of research provide evidence that educational inequalities and the ceiling for disadvantaged children and young people are held in place by a range of cumulative and interacting influences. Educational policy has responded by increasingly focusing on improving ‘standards’ in schools by raising targets, focusing on individual progress as well as attainment and paying particular attention to issues of behaviour and attendance. It has also attempted to widen the remit of the school and the curriculum more generally so as to recognise the importance of broad-ranging features of individual development beyond those of cognitive skill enhancement. But do these policies help to reduce low achievement? Before exploring in more detail the influences and potential levers on attainment, we contextualise our focus on low attainment by outlining the current picture of attainment in England and go on to discuss a number of different conceptions of low achievement.

The current picture of overall attainment in England

At the time of writing, the most recent picture of attainment at the end of secondary school (GCSE and equivalent examination results in England 2007/08) was as follows:

- 65.3 per cent achieved five or more grades A*-C at GCSE or equivalent (compared with 61.4 per cent in 2006/07)
- 47.6 per cent achieved five or more grades A*-C including English and mathematics at GCSE or equivalent (compared with 47.2 per cent in 2006/07)
- 91.6 per cent achieved five or more grades A*-G at GCSE or equivalent (compared with 90.9 per cent in 2006/07)
- 87.4 per cent achieved five or more grades A*-G including English and mathematics at GCSE or equivalent (compared with 87.1 per cent in 2006/07)

- 98.6 per cent achieved *any* passes at GCSE or equivalent (compared with 98.1 per cent in 2006/07)
- girls continue to outperform boys, particularly at the higher grades (A*-C); 69.9 per cent of girls achieved five or more grades A*-C compared with 60.9 per cent of boys

(Source: DCSF, 2009a, *Statistical First Release 02/2009*)⁴

These figures, however, do not reflect the numbers of students not entered for GCSE examinations, which some critics argue skews the pattern of overall achievement: 40,385 students sat fewer than five GCSEs or the equivalent in 2008 (DCSF, 2009a), meaning that it was impossible for them to reach the benchmark.

Problems defining low achievement

While there is some consensus about what is meant by levels of attainment, the concept of ‘low achievement’ has different connotations for different individuals and in different disciplines and is rarely clearly defined (West and Pennell, 2003). One of the issues when defining the notion of low achievement is in understanding what it is in relation to. Authors argue, for example, that the “categorisation of pupils into groups for the purpose of describing educational achievement can lead to the construction of one group as failing (e.g. boys) and the other as succeeding (e.g. girls)” (Smith, 2003:576). And as we will see in the sections to follow, the factors associated with low achievement are rarely so neatly delineated.

Definitions are made more problematic because the term ‘low achievement’ is frequently used synonymously with that of ‘underachievement’, which can carry quite a different meaning; while low achievement is automatically considered to be underachievement, high achievement may also be underachievement but the causes and consequences are likely to be very different (Gorard *et al.*, 2001). Gifted children, for example, are particularly vulnerable to boredom (Freeman, 1993) and if lessons are not engaging or are too easy, these students may switch off or deliberately provoke disturbance, leading to their not performing to the best of their abilities, i.e. underachieving. Plewis (1991: 384) thus argues that the term ‘low achievement’ is a far more preferable concept (see also Gillborn and Gipps, 1996), offering “less problematic and more precise terms” and better reflecting the relative achievements of students of different groups at the lower ends of the attainment distribution. It is this definition that we focus on in this report.

⁴ The figures used in these statistics are based on KS4 calculations which more accurately reflect the numbers of pupils in Pupils Referral Units and hospital units.

So who are the low achievers?

Who the low achievers are, then, depends on the description of ‘low achievement’. In Cassen and Kingdon’s report *Tackling low educational achievement* (2007), the authors adopt a broad view of what low achievement at age 16 means in order to capture the complexity of factors associated with the term and reflect how the relationships between these factors – and the likely prospects faced by school leavers – change slightly depending on the definition used. Their analysis of the Pupil Level Annual School Census (PLASC) covered 577,201 students in state secondary school reaching the age of 16 in 2003 and provides one of the most comprehensive profiles of low achievement in recent years. The four measures they use are:

- No passes at GCSE (or equivalent)
- No passes at GCSE (or equivalent) above grade D
- Not getting a pass in at least one of English or mathematics
- Not getting at least five passes of any grade including English and mathematics

Table 1 is reproduced from Cassen and Kingdon (op. cit.) and summarises the low achievement scores by the four measures in round figures.

Table 1: Four measures of low achievement

	No passes	No passes > D	No passes Engl or maths	Not 5 passes Engl & maths	All KS4 students
<i>%</i>	5.5	25.0	8.6	13.4	
<i>Numbers</i>	32,000	144,000	50,000	77,000	577,000

Using this four-fold classification, their results show that the majority of low achievers – more than 75 per cent – are White and British, with boys outnumbering girls by three to two. Of the main ethnic groups, Chinese and Indian students are the most successful in avoiding low achievement and those from African/Caribbean backgrounds are, on average, the least successful although, when compared with White British students of similar economic background, African/Caribbean students fare no worse. Similar results are reported from Strand (2007, 2008), who finds that the lowest attaining groups are both Black Caribbean boys and White British boys from low socio-economic status (SES) homes. However, Black Caribbean students from medium and high SES homes, and particularly boys, are underachieving relative to White British pupils. Nevertheless, the effect of class is strongest for White British pupils indicating that, for this group, relative deprivation has worse effects on attainment.

These analyses also underline the strong association between social background – here measured by eligibility for free school meals (FSM) – and low achievement; a relationship that is particularly marked for White British students. Attainment in primary school is also strongly and significantly associated with later low

achievement, highlighting the well-established finding of continuity in cognitive development (Kowleski-Jones and Duncan, 1999; McCall *et al.*, 1973; Wilson, 1983).

What are the long term risks of low achievement in childhood and adolescence?

The work of the Centre for Research on the Wider Benefits of Learning (WBL), its sister centre, the Centre for the Economics of Education (CEE), and others have clearly demonstrated the gains to be had from higher levels of educational attainment. These include economic and labour market returns, but also health, life satisfaction, family and intergenerational benefits at an individual level, as well as societal gains in terms of economic productivity, social cohesion and reduced crime (see Feinstein, Budge, Vorhaus and Duckworth, 2008, for a summary of the social and personal benefits of education).

Conversely, the costs of low achievement can be very high. McIntosh (2004) found that only about a fifth of the lowest achievers go on to a further education college and acquire any sort of education or training. Low attainment during secondary school has also been linked to wider measures of adult life chances including greater likelihood of being in a workless household with children, being a smoker and offending (Feinstein and Bynner, 2003). Low educational achievement has been identified as one of the main means by which social exclusion is passed from one generation to another (Hobcraft, 2000, 2002, 2003; see also Blanden *et al.*, 2005). There is also a large body of literature which shows that children of parents with higher levels of education do better in standard tests of achievement and school attainment than those of parents with less education (Bynner and Joshi, 2002; Department for Education and Skills [DfES], 2006a; Feinstein, Duckworth and Sabates, 2008; Feinstein *et al.*, 1999; Gregg and Machin, 2000).⁵

Research here also demonstrates the strong link between low attainment and attendance. School exclusions, for example, are a major risk factor in relation to later life chances with a significant minority of young offenders in courts having been excluded from school (Department for Education and Employment [DfEE], 1999). Those who are excluded from school as a result of poor behaviour, and persistent truants, tend to have lower status occupations, less stable career patterns and greater unemployment in comparison with others sharing similar backgrounds (Hibbett and Fogelman, 1990).

⁵ See Davis-Kean, 2005; Haveman and Wolfe, 1995; Klebanov *et al.*, 1994; and Smith *et al.*, 1997, for comparable US findings.

Influences and levers

The influences or factors⁶ contributing to low educational achievement are many and operate in complex and multifaceted ways. As such, there are difficulties in understanding the direction of relationships, their cumulative nature and the inherent interactions between different forms of later social risk (Social Exclusion Unit, 2004). Authors such as Sammons (1995) also note the importance of cumulative disadvantage – that experiencing one factor is less closely associated with low attainment than experiencing more than one factor (see also Duckworth, 2008). For example, some parents are able to influence the selection of a child’s school, who their child’s friends are, and the types and number of out-of-school activities in which their child participates (Furstenberg *et al.*, 1999; Silbereisen, 1995). More affluent families are also able to choose better-resourced and more desirable schools. Gibbons and Machin (2003), for example, find a positive association between school quality, measured by national league tables, and property prices. In addition, more educated parents may be better equipped to assess quality and so choose the more successful, higher-achieving schools (West and Pennell, 1999). Schools also contribute to the selection processes that can operate to reinforce social patterns in attainment, as league tables may give schools an incentive to select children in order to maximise their results (Hansen and Vignoles, 2005) – although legislation and codes of practice have been devised to try and negate these effects (see section on School choice and selection in Part II below).

The presence of multiple risks, in turn, makes the tasks of day-to-day family management that much more complex. Eccles *et al.* (1992) and Furstenberg *et al.* (1999) show that families living in high-risk, low-resource neighbourhoods have to rely more on in-home strategies to help their children develop and to protect them from the dangers of the neighbourhood. Conversely, families from low-risk neighbourhoods are better able to use resources from their community, such as organised youth programmes, to help their children develop the same talents and skills. Taken together, these studies demonstrate the kinds of strains and stresses that can accumulate for children and their families.

Furthermore, it is incorrect to assume that all pupils from a given background are going to have low achievement, and thus there can be problems referring to associations for particular ‘groups’ of pupils since average associations are not necessarily applicable to the individual. Feinstein and Sabates (2006) argue that “there are many steps on the pathway from risk to outcome. There are children at risk who do not experience harmful outcomes and there are children with low apparent observable risk who do” (p.1). This is the basic tenet of the literature on risk and resiliency, which highlights that the relationship between risk and negative outcome is

⁶ In much academic literature, the term ‘influence’ implies a causal relationship between two variables. In the context of the current report the word ‘factor’ may be more appropriate since causality in a true econometric sense is far more difficult to establish and has rarely been identified in this area.

not simply deterministic, mechanistic or inevitable (see Luthar, 2003 and Schoon, 2006 for further discussion on risk and resiliency frameworks).

Such issues result in problems identifying causal relationships between possible factors and individual low levels of attainment. This, in turn, leads to difficulties in identifying which potential levers to pull in order to raise attainment and thus in designing appropriate policies targeted to those most in need (see also Machin and Vignoles, 2005, for further discussion on this). Similarly, different processes work differently for different groups of children and young people. Thus there are unlikely to be ‘one-size-fits-all’ quick fixes or a single policy lever to raise overall attainment.

As we will see throughout this report, trying to lever – that is, to use or manipulate – any one factor will more than likely involve other factors, as well as individual characteristics and broader family and socioeconomic factors, whether intended or not. Thus assessing the extent to which any one factor is more ‘amenable’ than another is a challenging question. Nevertheless, and as noted above, the importance of these factors is widely accepted across the social science literature and has penetrated much of the government’s policy thinking and can consequently be seen in many initiatives aimed at raising low attainment. Our policy section describes in detail how some major policy initiatives are attempting to create potential levers from one or more of the factors identified and, where possible, points to evidence about their success, making suggestions about where attention could most usefully be focused in the future.

Part II: What are the influences on low attainment?

We consider the influences on attainment across three broad categories: the individual, the family and the school. This distinction reflects similar classifications made in the academic literature exploring features of educational success (see Feinstein, Duckworth and Sabates, 2008 for a review) as well as policy thinking regarding the drivers of attainment gaps (DfES, 2006a).

The individual

Prior achievement

Continuity in cognitive attainments is now a well established phenomenon in developmental research (Duncan *et al.*, 2007; Feinstein and Duckworth, 2006; Kowleski-Jones and Duncan, 1999; McCall *et al.*, 1973; Wilson, 1983). A wealth of data shows that children's achievement test scores are strongly related to their prior cognitive functioning and attainment of basic skills in literacy and numeracy and that earlier abilities are built on over time in hierarchical ways (Entwisle and Alexander, 1990; Pungello *et al.*, 1996; Whitehurst and Lonigan, 1998). Moreover, research here shows that the prior attainment of pupils is the most important predictor of later academic performance and that average attainment demonstrates a good degree of stability, particularly over the primary school period (Duckworth, 2007; Sammons *et al.*, 2007).

The strong influence of prior attainment means that many children who are low attainers early on fall into a pattern of low attainment throughout their school life, increasing their chances of social exclusion in adulthood (Bynner *et al.*, 2000; Feinstein and Bynner, 2003). However, individual ability and attainment are far from fixed or immutable and there is considerable mobility in both patterns of attainment (Duckworth, 2007; Melhuish *et al.*, 2006) and risk throughout childhood and adolescence. Thus, although low achievement and risk are not randomly distributed in a population, neither are they set in stone.

Gender

There is a sizeable literature documenting the gender gap in attainment (DfES, 2007; Gorard, Rees and Salisbury, 2001), which by the end of compulsory schooling is considerable: girls are approximately 10 percentage points more likely to achieve five or more A*-C grades in GCSE than their male counterparts, a figure that has shown little variation since 1995. This gender imbalance, however, is not confined to achievement at GCSE and is evident at most stages in the educational system, typically emerging during primary school and widening as children move to secondary school. National statistics indicate that more girls than boys reach a "good

level of development” in the Early Years Foundation Stage (DCSF, 2008f), and there is then a persistent gender gap in English in favour of girls, which is evident from KS1 through to GCSE. The equivalent gap in mathematics is smaller but shows girls to be slightly out-performing boys at KS1, KS3, and KS4 (DCSF, 2008e, 2008f, 2009a and 2009d). International studies such as the Programme for International Student Assessment (PISA) suggest a similar gender gap in attainment throughout schooling, favouring girls in reading and boys in mathematics, in other countries (OECD, 2004). However, by the end of secondary education, all of the 40 OECD countries listed report that girls are doing better than boys (OECD, 2006).

At the end of compulsory schooling, there is also a gender gap at the lower end of the distribution, but, as noted above, there are a number of ways to define ‘low achievement’ and the magnitude of the gender gap varies by the definition used. For example, national figures from 2004 show that 5 per cent of 16-year-old boys and 3 per cent of 16-year-old girls leave school without any qualifications at all (Machin and McNally, 2005).⁷ In their recent analysis of the PLASC data, Cassen and Kingdon (2007) show that there are also approximately three male low achievers for every two female low achievers when low achievement is defined as ‘No passes above grade D’ or as leaving school without at least five passes including English and mathematics. This ratio falls to 2.6:2 when the measure of low achievement is ‘No passes in English *or* mathematics’.

These authors further show that disadvantage is not a consistent factor in low achievement: “girls come from the same families and mostly go to the same schools, but do much better” (p.6). One possible explanation for the finding that girls consistently gain higher grades at the end of compulsory schooling is that the GCSE examinations are more ‘girl friendly’. Machin and McNally (2005), for example, analyse changes over time in the gender achievement gap for school-age children in England and consider the importance of some possible explanations for this gap. Using data from two British Cohort studies (National Child Development Study and the British Cohort Study) and the National Pupil Database (NPD)⁸, their results suggest that the gender gap has become worse over time in the UK, particularly in secondary schools, despite improvements in the overall achievement of both girls and boys. Of particular interest, however, is their suggestion that the introduction of coursework into the GCSE examinations is likely to be a key explanation for the dramatic widening of the gender gap between 1986 and 1998 as it coincides exactly with girls’ performance overtaking that of boys at 16. Powney (1996), for example, cites a number of studies that show that boys tend to be favoured by multiple-choice

⁷ See also Cassen and Kingdon (2007) for analysis of 16 year olds in 2003 using PLASC and the NPD. These figures show that of the 5.5 per cent of pupils leaving schools with no GCSE passes, 6.5 per cent are boys and 4.5 per cent are girls.

⁸ The NPD covers all students at school leaving age in state secondary schools and contains information from previous records going back to primary school.

questions and girls by essays and coursework. Girls may also do less well in timed examinations owing to the higher levels of anxiety (Gipps and Murphy, 1994).

Machin and McNally (2005: 358) are careful to argue, however, that the difference in GCSE attainment may not fully measure the ‘gap’ in human capital between the genders, “but rather a gap at the age at which compulsory schooling ends which is also coupled with those aspects of achievement that are deemed important by the education and examination system”.

Furthermore, there is a large educational literature concerning the role of school characteristics, for example single-sex schooling, and their association with gendered patterns in achievement. For example, few studies have focused on the question of whether some schools are more effective for one sex or the other, but the few that have find no discernable differences between observable school characteristics and, for example, gender differences in attainment (Arnot *et al.*, 1998; Burgess *et al.*, 2004). Machin and McNally (2005) argue that this does not mean that there is nothing schools can do to reduce the gender gap, but rather that the variation between schools in terms of inputs such as gender mix, admissions policy and the percentage of pupils eligible for FSM is not causing the differences observed in attainment between girls and boys. We return to both these issues below in the section on school level influences. It should be noted, however, that the widening gap between girls and boys over time is driven by the increased attainment of girls and not a decline in boys’ achievement. The widespread concern surrounding this growing gap is rarely viewed from this angle, but simply in terms of ‘boys’ underachievement’ (Epstein *et al.*, 1998; Mahony and Hextall, 2000).

Finally, several studies show that while the gender gap in attainment at the end of compulsory schooling is relatively stable across the social class groupings, there is considerable variation by ethnic group, with Black Caribbean and Other Black pupils showing wider gaps than other ethnic groups (DfES, 2005a). Cassen and Kingdon (2007) similarly report the probability of low achievement is significantly larger for most Asian and Black ethnic groups than for White pupils, other things being equal. Their results show that when using the measure ‘No passes above grade D’, White British boys are 8.5 percentage points more likely to be in this category than girls; the corresponding gap for Bangladeshi, Pakistani and African groups is 15.7, 16.1 and 14.9 percentage points respectively. Again, however, when a different definition of low achievement is used the size of the gender gap is no longer as large: “while minority ethnicity girls are very substantially better than minority ethnicity boys at avoiding ‘No passes > D’, they are only a little better at avoiding ‘Not 5 passes E and M’” (p.7).

As noted above, disentangling the unique ‘effect’ of any one factor from other influences on attainment is very complicated. It is not the aim of the current report to describe the attainment profiles of every possible combination of risk factors as they

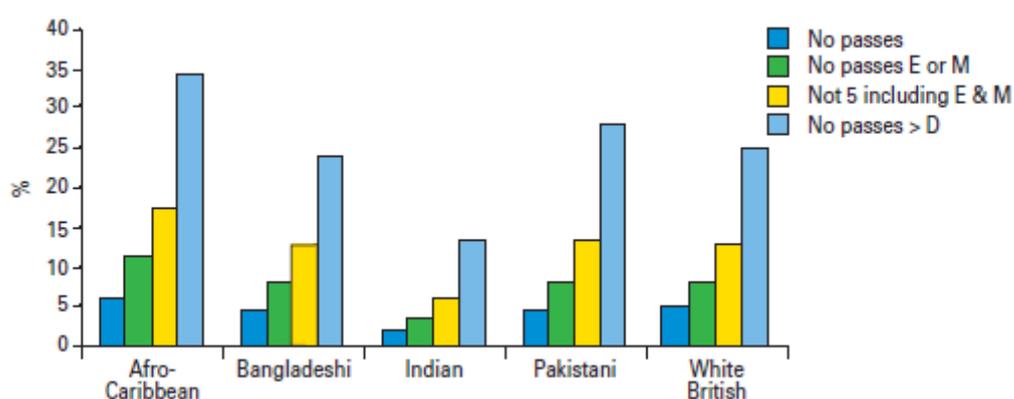
relate to low achievement, but rather to review the literature on the key factors associated with low achievement and highlight the relationships between them. We now turn to the issue of ethnicity in more detail.

Ethnicity

As with gender, recent years have seen considerable interest in the issue of achievement of children from different minority ethnic groups (West and Pennell, 2003; see Modood, 1998, for a more detailed account of the history of ethnic minority pupils and achievement). In the UK in particular a lack of adequate data on these groups has historically prevented detailed examination of this area. More recently, however, with the advent of datasets such as the Longitudinal Study of Young People in England (LSYPE) and the Youth Cohort Study (YCS) as well as a number of other research studies, more detailed investigation of ethnic variations in attainment over the course of schooling is now possible.

As for all pupils at an average level, there has been a general improvement in achievement of minority groups over the last decade. Data from the LSYPE show that the mean scores in KS3 assessments in English, mathematics and science for Pakistani, Bangladeshi, Black Caribbean and Black African groups were all substantially below the mean for White British pupils. This difference is the equivalent of over a whole year of progress in terms of National Curriculum levels. There are also differences in the distribution of achievement by minority ethnic status in GCSE examinations. Figure 1 is taken from Cassen and Kingdon (2007) and shows the distribution of low achievement in PLASC and the NPD by ethnic group and for four different definitions of 'low achievement'.⁹

Figure 1: Distribution of low achievement



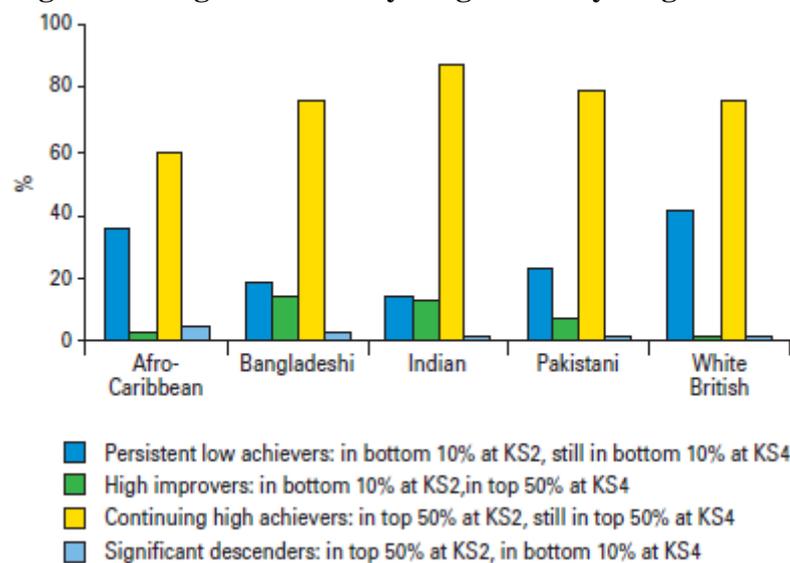
Source: Cassen and Kingdon (2007)

⁹ Note that the White British group is much larger than all the other groups combined. In these data, 80 per cent of all pupils are White British and constitute the majority of low achievers.

Studies here emphasise, however, that many ethnic groups make stronger educational progress during the KS4 period – Years 10 and 11 – than they do during KS3 – Years 7, 8 and 9 (Strand, 2006; Demie and Strand, 2006; Wilson et al, 2005). For example, Black African and Bangladeshi pupils have caught up with the White British group by the end of KS4 and Indian pupils who were only marginally ahead of White British pupils at KS3 are substantially ahead at the end of compulsory schooling. At KS4, the mean score for Black Caribbean pupils remains significantly lower than White British. However, the mean score for Pakistani pupils is only just below the White British mean, and the mean scores for Bangladeshi and Black African pupils do not differ significantly from the mean for White British pupils (Strand, 2008).

Cassen and Kingdon’s analysis (2007) reveals that mobility out of low achievement – that is looking at progress from KS2 at the end of primary school, when pupils are age 11, to KS4 – varies greatly by ethnic group (see Figure 2 below). The White British group, for example, have the highest risk of remaining in the lowest 10 per cent of the achievement distribution if they start there, higher even than the Caribbean pupils (40.6 per cent and 34.7 per cent respectively). They are also less likely to retain ‘continuing high achievers’ status, i.e. staying in the top 50 per cent at KS4 given this position at KS2, than Bangladeshis, Indians or Pakistanis. However, the risk of falling off track and into lesser achievement is greatest for the Caribbean group, with only 59.4 per cent of pupils who start in the top half of the achievement distribution at KS2 remaining there at KS4.

Figure 2: Progress from Key Stage 2 to Key Stage 4



Source: Cassen and Kingdon (2007)

As noted above, however, disentangling the root cause of low achievement is highly complex, with multiple influences compounding each other so as to produce an overall downward effect on attainment. For example, minority ethnic pupils are more likely to experience deprivation than White British pupils: 70 per cent of Bangladeshi

pupils and almost 60 per cent of Pakistani and Black African pupils live in the 20 per cent most deprived postcode areas compared with less than 20 per cent of White British pupils (DfES, 2006b). Interestingly, however, when background factors such as neighbourhood disadvantage and FSM status are controlled for, Bangladeshi, African and Caribbean pupils show a greater performance advantage over White British pupils and are more likely to avoid low achievement (Cassen and Kingdon, 2007). As noted above, there are also gender differences among minority ethnic groups.

Strand (2008) further notes that the attainment of White British pupils is differentiated to a greater extent than any other ethnic group by a wide range of socio-economic variables. His analysis shows that the attainment of White British pupils is particularly vulnerable to factors such as low parental social class, low maternal education, relative poverty, housing tenure and other measures of neighbourhood disadvantage. While these factors impact negatively on attainment within most ethnic groups, they seem to be associated with disproportionately low attainment among White British pupils. He therefore concludes that: “it makes no sense to talk of main effects of ethnicity when the effect depends on the level of other factors, such as gender or the [socio-economic] class of the home. A more constructive approach may be to consider combinations of factors as defining groups whose educational progress and attainment is of particular concern” (p.46).

Aspirations

Young people’s aspirations – which represent their future goals and the motivation and effort they put forth to achieve them – play an important role in their attainment. Numerous studies show that teenage aspirations predict future attainment both in occupational and educational spheres (for example, Bond and Saunders, 1999; Khoo and Ainley, 2005; Looker and Thiessen, 2004; Schoon, 2006; Schoon *et al.*, 2007; Strand, 2007). The Longitudinal Survey of Australian Youth (LSAY), for instance, demonstrates that intentions to leave or complete school formed early in secondary schooling significantly related to participation in the latter years of schooling (Khoo and Ainley, 2005). A strong association was found between aspirations in Year 9 to proceed to Year 12 and actual Year 12 participation, emphasising the importance of earlier aspirations on later educational attainment.

There is also evidence that aspirations may have an independent effect on later attainment, separate from other influences. In the LSYPE, for instance, the aspirations of young people (aged 14) to stay in education beyond the age of 16 boosted their national test scores by an additional 1.6 points (i.e., equivalent to one and a half terms of learning) compared with those young people who did not have such aspirations (Strand, 2007). This finding is net of the effects of family background (i.e., social class, maternal education, poverty, ethnicity, home ownership, and family composition), parental involvement in school, the provision of educational resources

in the home (a computer and private tuition), and parental aspirations. The boost was still evident when prior attainment was controlled for, although it was reduced to 0.5 points. Nevertheless, establishing direct causality between aspirations and attainment is difficult. Research, for example, indicates that aspirations and ability influence each other throughout the school years (Bond and Saunders, 1999). Aspirations, therefore, are both a predictor and product of one's abilities, personal attributes, socialisation, and experiences (Gutman and Akerman, 2008b).

High aspirations, however, do not necessarily predict high attainment, particularly among some minority ethnic groups. Black African and Black Caribbean pupils, for example, have higher aspirations than White British pupils, but they have lower attainment. Using the LYSPE, Strand (2007) found that Black African and Black Caribbean pupils had less than expected progress in their national test scores even though they had high aspirations compared with White British pupils. According to Strand (2007), Black African and Black Caribbean pupils may not get the expected return from their commitment to education as they are more likely to live in disadvantaged neighbourhoods and attend disadvantaged schools. Thus, evidence that aspirations predict educational achievement, even allowing for their background characteristics, implies that efforts to boost young people's aspirations are valuable in and of themselves. However, these must take place alongside measures that facilitate the achievement of aspirations, particularly for the most disadvantaged young people (Gutman and Akerman, 2008a).

When considering the influence of teenage aspirations on later attainment, there has also been some concern that the crucial period of aspiration formation occurs before adolescence (Cabinet Office, 2008). In the theory of Circumscription and Compromise, the aspirations of children aged between 9 to 13 years develop from idealistic goals to more realistic assessments of their possible futures (Gottfredson, 2002). At this age, children may progressively temper their aspirations due to perceived barriers such as gender and racial stereotypes and economic constraints. Adolescents may also be limited by their own views of their abilities and see some careers as too difficult or as posing too high a risk of failure. For these reasons, younger teenagers (aged 11 to 14 years) are viewed as the key age group to target for raising aspirations (Cabinet Office, 2008).

Behaviour and attendance

The relationship between academic difficulties and behaviour problems has a long history in the educational literature (Trzesniewski *et al.*, 2006) and is a major source of discontent among teachers, creating difficulties for teaching and learning in some schools (Hallam *et al.*, 2005). Many studies have found a robust association between young people's behaviours and later attainment. In particular, antisocial behaviours, hyperactivity and conduct problems stand out (Dionne, 2005; Hinshaw, 1992; Mandel, 1997), with peer problems, experiencing bullying and pro-social behaviours

(negatively) slightly less strongly associated with attainment (see also Barreau *et al.*, 2008).¹⁰

In their review of disadvantaged youth, Morris *et al.* (1999) similarly highlight a number of associations between poor educational outcomes and a range of dimensions of behavioural difficulties, including truancy, bullying and exclusion from school. However, these authors note that there is often ambiguity between what constitutes an indicator of poor achievement and what a cause:

Arguably, there has been too much emphasis on dealing with symptoms and not enough on identifying and tackling underlying causes, and on what pushes young people to become de-motivated, be disaffected and disengaged.

(Morris *et al.*, 1999: 53)

Understanding the causal relations underpinning such relationships and why the two go hand in hand has important implications for pedagogy in general as well as more specific interventions.

If, on the one hand, antisocial behaviour problems were responsible for educational difficulties, then treating the behaviours themselves could improve educational difficulties. If, on the other hand, antisocial behaviour problems were a response to educational difficulties, then interventions designed to increase academic success could ameliorate antisocial behaviour problems ... It is possible that the two are not actually causally related. That is, some common developmental antecedent may cause both ... and the two may have no direct effect on each other.

(Trzesniewski *et al.*, 2006: 72)

A recent study by Trzesniewski *et al.* (2006) has attempted to unpack these issues using a sample of twins born in England and Wales in 1994 and 1995 and testing a number of hypotheses concerning the contribution of genetic and environmental factors between reading and conduct disorder. Their results indicate that the relationship between reading achievement and antisocial behaviour is stronger for boys than for girls and that this association can be largely attributed to environmental factors that are common to both, such as a stimulating home learning environment, parental education, family resources and young maternal age (see below for further detail on the family level influences on attainment).¹¹ The authors argue, however, that reading achievement and antisocial behaviour are intertwined and thus it is the unfolding reciprocal influences of each on the other over time that accounts for the consistently found correlations between the two, rather than one causing the other.

¹⁰ Barreau *et al.* also find that peer problems, experiencing bullying and pro-social behaviours are less socially stratified than other behaviour problems.

¹¹ In contrast, the reason Attention Deficit Hyperactivity Disorder (ADHD) was related to reading achievement was because of the genetic factors they had in common.

The Trzesniewski study is one of the first to systematically examine the extent to which associations between academic attainment and behavioural adjustment vary by gender, despite well-documented differences in gender achievement gaps and higher prevalence of behaviour problems in boys (Moffitt *et al.*, 2001). The authors suggest that their results might indicate that interventions aimed at improving reading achievement through improving behaviour problems, or vice versa, may be of particular benefit to boys. While there may be some benefit for girls as well, the low prevalence of reading difficulties and behaviour problems in girls mean that it is likely to be more cost effective to focus interventions on boys. We return to these issues below in Part III.

The limited studies that examine other moderating influences on problem behaviours suggest that, on average, children from more socially disadvantaged groups are also more likely to have higher rates of problems with externalising behaviour and attention (Entwisle *et al.*, 2005; Miech *et al.*, 2001; Raver, 2004), as well as a greater propensity to partake in risky behaviours such as drug-taking, vandalism and criminality (Barreau *et al.*, 2008).

Analysis of the YCS explored the progress of low achievers (defined as young people in the bottom third of the national distribution of GCSE results in England and Wales) and found a very strong link between low achievement and truancy (DfES, 2001; see also Payne, 2000. See Brown, forthcoming, for recent analysis of London data). These data also show that far fewer young people who were persistent truants achieved five or more GCSEs at grades A*-C compared with those who did not truant (10 per cent versus 58 per cent), and 21 per cent obtained no GCSEs at all, compared with 3 per cent of those who did not truant. Furthermore, far fewer persistent truants remained in full-time education than either occasional truants or those who reported no truancy (26 per cent versus 61 per cent and 79 per cent).

Finally, the greater the number of fixed-period or indefinite exclusions a pupil has is associated with a lower level of attainment across all subjects (Parsons *et al.*, 2001) and, as noted earlier, exclusions are not only problematic during the school years but are also associated with negative outcomes in later life (DfEE, 1999). Young people who are excluded from school are less likely to gain any qualifications or continue in education post-16 (see West and Pennell, 2003, for further discussion here). As with behaviour problems more generally, exclusions are far more common for boys than for girls (Gallagher, 1997) and show continuity over time, with those pupils excluded in primary school also more likely to be excluded in secondary school (Parsons *et al.*, op. cit.).

Special Educational Needs

Cassen and Kingdon (2007) report that 60 per cent of pupils who get no passes at all at GCSE have special educational needs (SEN). Furthermore, a child with SEN is nine times less likely than one without to get five good GCSEs (DfES, 2006c). While implying that addressing such needs could have a substantial impact on overall levels of attainment, it is clear that this group of students is not homogeneous; their needs are varied and complex, requiring particular types of interventions, a review of which is beyond the scope of this report. More detailed analysis shows that, after controlling for other factors, about 20 per cent of the total association between SEN and low achievement reflects that SEN pupils are more likely to attend poorer quality schools.¹²

SEN children present some of the greatest challenges to the educational system: SEN vary enormously – both in type and severity – and frequently require extensive, expensive support, which is not always easy to access or willingly given. There is also considerable overlap between pupils with SEN and those eligible for FSM, and the permanent exclusion rate for those with SEN statements is far greater than for those without statements (around seven times higher in 2001: DfES, 2001). Recent years have seen considerable debate concerning whether or not these students can or should be taught in mainstream schools (for example see Cigman, 2006; Dyson, 2005). Given the complexity of the relationship between low attainment and SEN and the highly diverse nature of this group, limitations of time and space do not allow us to cover this area in detail here.

Looked-after children

Looked-after children, who make up around 1 per cent of pupils at KS4, are also a group who have piqued the interest of policy makers and academics alike. Official statistics show that while only 1.1 per cent of all pupils left school in 2007 without at least one GCSE or GNVQ, for young people who had been looked after (continuously for 12 months in Year 11), the figure was 36.3 per cent (DCSF, 2008g).

This group of young people in particular face a number of barriers to achieving in school: while the majority (two thirds) of the sample had had only one or two educational placements during their secondary phase schooling while they were in care, nearly one third had had three or more different placements (Fletcher-Campbell and Archer, 2003). A report by the Social Exclusion Unit (2003) found that the permanent exclusion rate for looked-after children is ten times higher than the national average and as many as 30 per cent of children in this group could be out of mainstream education as a result of truancy or exclusion. Moreover, children who have spent time in public care are also more likely to have had a permanent exclusion

¹² We are unable to identify the extent to which “poorer quality schools” includes special schools.

as their initial exclusion (Parsons, *et al.*, 2001). Looked-after children are also nine times more likely than the average child to have SEN (Maxwell *et al.*, 2006).

The family

Socioeconomic background

A vast body of research shows that higher achievement is negatively associated with economic and social disadvantage; children growing up in more disadvantaged families perform, on average, less well than children born into more advantaged families (DCSF, 2009e; DfES, 2006a). Emerging early, this social gradient¹³ is evident before children enter school (Feinstein, 2003; George *et al.*, 2007; Jones and Schoon, 2008; Melhuish *et al.*, 2001), exacerbates as pupils progress through the education system, being more marked at later ages (Cassen and Kingdon, 2007; DfES, 2006a, 2006d; Feinstein, 2004), and continues on into adulthood (Bynner *et al.*, 2000; Feinstein and Bynner, 2004). Educational inequalities also play a central role in the transmission of disadvantage across generations (Chowdry *et al.*, 2009; Blanden *et al.*, 2005; Blanden *et al.*, 2007; Hansen and Joshi, 2008) and are of ongoing concern to policy-makers (DCSF, 2007a; DfES, 2004a, 2005a; HM Government, 2003).

Despite average overall improvement, large, unconditional differences in educational achievement according to family socioeconomic background persist and low attainers remain disproportionately represented among lower social classes. Pupils eligible for FSM, for example, fall further behind non-FSM pupils at each Key Stage (DCSF, 2009e; DfES, 2006a). The most recent data on GCSE attainment based on results from 2007/08, for example, show that the proportion of pupils in the most deprived decile of pupils¹⁴ achieving five or more A*-C GCSEs including English and mathematics (and equivalent) is just 29.4 per cent. This compares with 70 per cent of pupils in the least deprived decile (DCSF, 2008f). Also in 2008, the proportion of pupils in KS2 achieving Level 4 or above – the target level for all pupils at the end of primary school – in the bottom decile of the deprivation index was 70 per cent in English and 69 per cent in mathematics, compared with 91 per cent and 89 per cent respectively for those in the top decile (DCSF, *op. cit.*). Other national data show that

¹³ Across the social sciences, social background and disadvantage are analysed using different measures and refer to the relative resources available to families, including family income, parental occupation and/or education, frequently combined into a single dimension of socioeconomic status (SES), social class and wealth. The attainment gap between more and less disadvantaged families is similar whichever measure is used (for example, Feinstein, 2003), though the causal mechanisms driving these relationships may be different if not related. Throughout this report we therefore refer to disadvantage or SES and use these terms interchangeably.

¹⁴ This measure of social background uses the Income Deprivation Affecting Children Index (IDACI). The IDACI is an alternative to the frequently used Free School Meals (FSM) measure of classifying schools into varying levels of deprivation. Pupils have an IDACI value between 0 and 1 based on their postcode, yielding a greater degree of differentiation than FSM which is just a Yes/No eligibility indicator. Note, however, that the IDACI measure is not specific to the pupil, but relates to their postcode.

77 per cent of pupils with fathers in higher professional occupations achieved five or more GCSEs at grades A*-C or equivalent in 2004, compared with 53 per cent with fathers in intermediate occupations, and only 33 per cent with fathers in routine occupations (DfES, 2005a). By KS4 (ages 14 to 16), the social class attainment gap is three times as large as the gender gap.¹⁵

This association between family social background and children's academic development is widely established (see also Rutter and Madge, 1976; Schoon *et al.*, 2002) and fairly universal, although with varying degrees of gradient, across countries (Unicef, 2002; see also Duncan and Brooks-Gunn, 1997; Pungello, *et al.*, 1996, for comparable US evidence). For the UK, this relationship is one of the highest amongst the members of economically developed countries in the OECD (OECD, 2002; see also Hansen and Vignoles, 2005).

As noted above, social inequalities in educational attainment are the product of complex relations between different features of family background,¹⁶ such as parental education (Feinstein, 2003; Smith *et al.*, 1997; Wolfe and Haveman, 2002), income and experiences of poverty or financial hardship (Duncan and Brooks-Gunn, 1997; Gregg and Machin, 2000), occupation and employment status. These factors may impact on educational and other developmental outcomes but, as highlighted in the preceding section, their effect may well depend on children's characteristics, such as gender and ethnicity, and other features of the family, such as birth order and number of children. It is also the case that it is often cumulative disadvantage and compounding risk that matters more than any one risk associated with a single demographic factor and these constellations of risk vary by age, context and the duration of individual experience (Sacker *et al.*, 2002; Schoon, 2006). Educational inequalities also play a central role in the transmission of disadvantage across generations (for reviews, see Feinstein, Duckworth and Sabates, 2008; Haveman and Wolfe, 1995).

The home environment

Increasingly, the role of the family in learning and the links between families and schools are being seen as key in tackling such problems. For example, growing awareness of the importance of parents and the home environment in shaping children's well-being and achievement, coupled with the recognition of the school as a site for engagement in broader aspects of social and personal development (DfES, 2005b), has raised interest in the interactions between home and school as a way of addressing issues of educational attainment and inequality. This more holistic

¹⁵ As in much educational research, social class is proxied for by those eligible/not eligible for free school meals. Hobbs and Vignoles (2007) note however, that eligibility for free school meals is an imperfect surrogate for SES as measured by a wider range of variables.

¹⁶ Social inequalities are also constrained by genetic factors and gene-environment interactions, as well as by personal attributes.

approach is reflected in the creation of the new Department for Children, Schools and Families (June 2007) and its strategy document, *The Children's Plan* (DCSF, 2007a). This section reviews evidence on some of the elements of parenting and the home environment that are thought particularly important for children's educational success, namely educational behaviours, parental involvement and parental aspirations (see Feinstein, Duckworth and Sabates, 2008, for a more thorough account of these areas).

A range of features of families is important in influencing attainment outcomes. Much research in this area has focused on the early years and shown, for example, the importance of positive, consistent and engaged parenting styles for children's positive development (Baumrind, 1967; Bornstein and Bradley, 2003; Bowlby, 1969, 1973; Maccoby and Martin, 1983; Masten and Coatsworth, 1998). Quality family relationships and secure attachment in childhood have also been found to act as sources of resilience in the face of social or economic disadvantage in adulthood (Bartley *et al.*, 2007; Desforges and Abouchar, 2003).

Educational behaviours in the home include reading to children, actively teaching letters, numbers and nursery rhymes, engaging infants and toddlers in drawing and painting activities in early childhood and later helping with homework and being actively involved in schooling. These features of the day-to-day family environment have, in particular, been found to have real and considerable effects on children's development, particularly in the domains of cognitive ability and academic achievement (Sammons *et al.*, 2007). Rich and cognitively stimulating experiences are likely to influence both the child's skill levels as well as their interest in continued engagement in such activities. In turn, skill and interest level should facilitate transitions to school, motivate the pursuit of educational goals and endeavours, and so influence subsequent academic success. Authors such as Wigfield and Asher (1984), for example, suggest that factors in the home outweigh factors in the school in predicting children's desire, motivation and ability to succeed in school.

Results from the Effective Pre-school Primary (and Secondary) Education Study (EPPE3-11, now EPPSE, for example see Sammons *et al.*, 2002) document the importance of broad features of a young child's home learning environment (HLE), which includes measures of parents' reading to children, encouraging playing with, teaching and actively engaging children with letters and numbers, teaching songs and nursery rhymes, painting and drawing and visits to the library with children. While 'distal' (i.e., less immediate) factors such as mother's educational level and family socio-economic status are highly significant, the HLE has been found to exert a significant and independent influence on attainment at three plus years of age, as well as later at entry to primary school (rising fives) and on progress during this pre-school period (see also McGroder, 2000). As with their findings for the influence of parental reading with children, researchers at EPPSE have found that these results continue to hold when the estimation controls for distal features of the family including parents'

education, socio-economic status and the number of siblings, as well as child level characteristics such as child's gender and age. Rowe (1991) similarly indicates that regardless of family socio-economic status, age and gender, reading activity at home has significant and positive influences on measures of pupils' reading achievement and attitudes towards reading. Moreover, these results also show a strong interdependence between students' attitudes towards reading and reading activity at home, both of which had significant positive influences on reading achievement.

Growing up in a home rich in cognitive stimulation and educational opportunities not only influences literacy development but also has a lasting impact on a child's desire to learn. Gottfried *et al.* (1998) used structural equation modelling in longitudinal data to show that children whose homes were higher in cognitive stimulation (measured at age 8) had higher academic intrinsic motivation from ages nine to thirteen, conditional on parents' socio-economic status. The results of their analyses, which look at pathways for these effects over time, suggest that the effect of the home environment is continuous as the earlier measures of the provision of cognitive stimulation positively related to subsequent motivation, both directly at ages 10 and 13, as well as indirectly through earlier measures of academic intrinsic motivation. The authors argue that family socioeconomic status is filtered to the child through the immediate home environment they experience (here the provision of a home environment rich in active academic stimulation), a social climate that supports and encourages an intellectual and cultural orientation, and a variety of learning opportunities. These 'proximal' experiences, in turn, impact directly on the development of intrinsic motivation, adding to positive cycles of educational success.

Parental involvement

Parental interest and involvement in school is considered an important component in children's educational and cognitive development and shows strong and positive links with school achievement and adjustment. As noted above, strengthening the cooperation between schools and parents is increasingly being seen as critical in improving the school careers of all students, particularly those from disadvantaged groups, such as ethnic minority and low socio-economic status students. Expanding the involvement of parents in the education of their children has been viewed as an important strategy that might help to advance the effectiveness and improve the quality of education (Chrispeels, 1996; Scheerens and Bosker, 1997).

Feinstein and Symons (1999), for example, find strong associations between teachers' assessments of the interest in learning of their students' parents and the attainment of children (see also Sacker *et al.*, 2002; see Reynolds, 1992 for comparable findings for the US). These authors make use of the strengths of longitudinal data to control for other possible influences and find that change (growth) in attainment between the ages of 11 and 16 was related to the parents' interest in their child's education, as rated by teachers, when that child was aged seven. Teachers were asked to rate their

impression of the interest parents took in the progress of their child's learning and education on a scale of low, medium or high interest. Using a measure of parental interest in children's education prior to the measures of attainment (here at 11 and 16) reduces the potentially confounding bias of teachers simply reflecting the ability of that child in their rating of parental interest. It seems likely, therefore, that this is not just a misreport by the teacher who sees a pupil doing well and infers parental interest falsely. However, this variable does not refer to parental involvement explicitly and may pick up the effect of parent cognitions, such as aspirations and expectations, rather than specific parental behaviours per se.

In a comprehensive review of the literature on the impact of parental involvement, parental support and family education on pupil achievement and adjustment, Desforges and Abouchar (2003) highlight the specific importance of 'at home' parental involvement. Noting the 'catch-all' term of 'parental involvement', subsuming good parenting, helping with homework, talking to teachers, attending school meetings and functions, and being involved with aspects of school governance more generally, the authors summarise a wealth of international evidence that supports the view that parent involvement has positive effects on pupil achievement and adjustment, net of parental social class and educational level. As with other family level influences, their review highlights the particular importance of parental involvement during the pre-school and primary years. This evidence also suggests that the home learning environment and the nature of parental involvement has a greater influence on child achievement outcomes than does the variation in school quality, a finding that holds across all social backgrounds and ethnic groups. And, while it may diminish as children get older, parental involvement nevertheless remains a significant factor in secondary schools, where it affects students' own educational aspirations and staying-on rates. Interestingly, parental involvement in the form of home supervision was shown to be negatively related to achievement. Desforges and Abouchar contend that this may reflect a more reactive type of involvement, increasing in response to pupil difficulties.

Research shows that parental involvement varies considerably by features of family background such as parents' social class, level of education and single-parent status as well as parents' own educational experiences and characteristics of the home including maternal psycho-social health. Moreover, it is strongly influenced by the child's own level of achievement: the higher the level of achievement, the more the parent gets involved (see Feinstein, Duckworth and Sabates, 2008). However, precisely which forms of parental involvement are particularly effective and which aspects of the development of children are specifically affected remains unclear and research on the differential effects of parental involvement on pupil-related outcomes is scarce (Jordan *et al.*, 2001).

Parental aspirations

Parental aspirations are key factors in the attainment of young people, perhaps even more important than other family and parent characteristics. Recent studies, for example, indicate that parental aspirations had a greater effect on national test scores than other parental variables such as health, values, and involvement in learning (e.g., Strand, 2007). Evidence also indicates that parental aspirations predict students' achievement independent of other effects. Using the LSYPE, Strand (2007) found that young people (aged 14) whose parents had aspirations that they would continue in education post-16 had an average KS3 score that was four points higher (i.e., equivalent to four terms of learning) compared with young people whose parents did not have such aspirations (Strand, 2007), even controlling for family background, parental involvement in school and the provision of educational resources in the home. Therefore, parental aspirations are likely to play a role in the students' achievement above and beyond parents' socioeconomic characteristics and their behaviours.

Parental aspirations have also been found to explain differences in pupil progression in which prior attainment is taken into account. In the LSYPE young people whose parents had aspirations for them to continue in full time education after age 16 scored 1.2 points higher (e.g., equivalent to more than one term of learning) on KS3 progression than did their peers whose parents did not have such aspirations, net of other background characteristics and parental behaviours (Strand, 2007). High aspirations, therefore, have a positive influence on attainment, but their effects may be less when examining changes in achievement. This may be because much of the difference among young people is already represented in their prior achievement. Peers and teachers may also exert more influence than parents as young people progress through secondary school (Gutman and Akerman, 2008a).

Evidence indicates that parental aspirations may also vary according to minority ethnic group. In the LSYPE, for example, parental aspirations for White British children were the lowest of any group, with only 77 per cent expecting the pupil to stay in full-time education (FTE) after the age of 16, whereas parental aspirations in minority groups were high (above 90 per cent). However, these high aspirations do not necessarily translate into higher attainment. For example, Strand (2007) found that although minority parents are higher on all of the behaviours and attitudes associated with attainment at KS3 – e.g., high levels of parental aspirations, supervision and involvement, low levels of quarrelling with the pupil, and providing private tuition and a home computer – all these generally advantaging factors were not associated with relatively greater attainment among minority ethnic groups. High aspirations, therefore, may not be enough to offset other factors relating to low attainment such as cultural barriers, teacher and school discrimination, and economic difficulties (Gutman and Akerman, 2008b).

The school

As the review above has demonstrated, we know that children's skills and knowledge on entry to school and gender are important factors influencing individual progress, attainment and school assessment. We know too that features of family socioeconomic background, such as parental education and income levels (e.g. as indicated by FSM eligibility), also have a considerable impact on individual achievement and subsequent life chances. Furthermore, the home environment and parental involvement are important, as are within-child or endogenous factors, such as intelligence, self regulation and ability to concentrate (for a review on the importance of self-regulation and attainment, see Duckworth *et al.*, forthcoming). Over and above these influences, the evidence is that schools alone have had little effect in boosting the performance of potential low attainers. Indeed, as we shall see, there is evidence to suggest that there have been forces operating within schools that de-incentivise a focus on those at the bottom of the achievement distribution and further disadvantage students in the secondary phase of their education. However, this by no means implies that attempts by schools to assist students at risk of low achievement are unimportant: after the family, schools are one of the most salient social contexts for children aged over 4 years. The final section of Part II reviews the literature on the school-level influences as they relate to low achievement and considers the relationship between choice, selection and school composition, ability grouping practices and resourcing in schools.

Beginning with the early work of Coleman (Coleman *et al.*, 1966), research in the area of school effectiveness, i.e. whether schools make a difference to individual attainment, has been a central concern of social scientists for the last four decades. Using national probability samples of elementary and secondary school students in the US, Coleman was the first to study the association between academic performance and school and family input measures. He found that when individual socio-economic background characteristics are held constant, the differences among schools only accounted for a small proportion of the differences in achievement. This work led to a series of studies examining the impact of schools on attainment that has produced mixed findings, ranging from little or no associations between school inputs and pupil achievement (Hanushek, 1986, 1989) to substantial ones (Greenwald *et al.*, 1996).

Advances in statistical methods, however, have enabled researchers to assess more accurately the impact of school factors in predicting academic achievement, and the school effectiveness research conducted in the 1980s and 1990s has consistently pointed to the existence of significant differences between schools in their impact on students. That is to say, some schools are more effective than others in facilitating pupil progress (see Tizard *et al.*, 1988, for infant schools; Mortimore *et al.*, 1988, for junior schools; Thomas and Mortimore, 1996, and Willms, 1985, for secondary schools). There are also compositional or peer group effects highlighting that the background characteristics of students within a school also impact on the overall

achievement in that school, such that when a school has more disadvantaged students, it is more likely that its average attainment will be lower, whereas when there are more advantaged students, average attainment will be higher. The central feature of research into the general issue of school effectiveness is an aim to discover which factors are associated with more effective schools and teachers and to suggest potential policy levers based upon this.

School choice and selection

The 1988 Education Reform Act introduced open enrolment in England and Wales, allowing parents to choose which secondary school to send their children to, rather than being limited to the closest one. The general aim was to create a more competitive system – a quasi-market – in order to improve school accountability by providing teachers and schools with appropriate incentives for efficiency and effectiveness: “the idea was that popular schools would be allowed to expand without limit (given capacity limitations) and unpopular schools would be forced to improve or face possible closure” (Chevalier *et al.*, 2005: 41). In the UK, there are a limited number of studies that suggest that efficiency improvements can be directly attributed to this type of competitive approach. Bradley *et al.* (2001), for example, report that schools with the best examination performance grow most quickly, increasing competition between schools and, in turn, resulting in improved exam performance.

However, there is also evidence to suggest that the quasi-market introduced by this reform has actually served to reinforce inequality within the education system. School performance, for example, has been linked to increases in house prices (Gibbons and Machin, 2003, 2004), lessening the likelihood that students from lower socioeconomic groups will be able to attend higher-quality schools. More recent evidence also indicates that where one lives, or location, explains most of the gap in school quality (Burgess and Briggs, 2006). Although there are consistent significant differences in school quality even among neighbouring schools, the magnitude of the difference in these instances is small. More educated parents appear to have better information on and a greater understanding of school performance via league tables (West and Pennell, 1999) and middle class parents may be better at working the system of school admissions (Burgess and Briggs, 2006). Therefore, those in high socioeconomic groups who might be unable to move into the best catchment areas have greater capacity, and cultural, social and economic resources, to exploit the market to their children’s advantage (Gewirtz *et al.*, 1995). Despite increased consumer choice, then, children from lower socioeconomic groups, who were already more likely to attend socially-deprived schools, appear to do so to a greater extent than previously (for further discussion here see also Machin and Vignoles, 2004. See Hoxby, 2003, for an overview of US evidence). These effects may be compounded by school selection based on children’s ability and background. Nevertheless, findings from Burgess and Briggs (2006) highlighting the importance of location suggest that a school choice system that reduces or eliminates the role of location may have an important part to play in narrowing the gap in admission to good schools.

The marketisation of the education system has also meant that many popular schools have become oversubscribed and need some means of selecting students. Since devolved school funding is linked directly to pupil numbers, schools have an incentive to attract and select middle and high SES students to maximise their “league table” position. This so-called “cream-skimming”¹⁷ can result in negative peer effects on attainment in other worse-performing schools as the social composition or peer intake of schools (measured by the proportion of students from disadvantaged family backgrounds) has been shown to influence pupil attainment (Feinstein and Symons, 1999; Mortimore *et al.*, 1994; Robertson and Symons, 2003). This may result, in part, from different environmental cues concerning what constitutes good performance. Gutman and Feinstein (2008), for example, found that feelings of scholastic competence were associated with higher achievement for pupils in average primary schools, whereas the association was negative for pupils attending more disadvantaged schools. As pupils in disadvantaged schools have, on average, lower overall achievement, pupils may have a different frame of reference for external comparison than children who attend more advantaged schools, highlighting the importance of peer intake on school attainment.

Thus those at risk of low attainment because of socio-economic disadvantage may have this risk increased by educational market forces and the associated effects of social sorting. A well-regulated system of school choice, consistently applied, and with help to support families in navigating such a system, is an important tool in mitigating these effects.

School composition and setting

Differences in the social composition of schools account for a considerable amount of the variation observed between schools (for example, see Goldstein and Sammons, 1997, for the UK; Bryk and Raudenbush, 1988, Lee and Bryk, 1989, for the US). For example, value-added analysis¹⁸ of primary school data suggests that, on average, students make more progress in schools with a high proportion of girls, and less progress in schools with a high proportion of students entitled to FSM, a high proportion of students with English as a second language and where the school

¹⁷ Schools exercise choice when they both constitute their own admissions authority, and are oversubscribed. West and Hind (2003: 3) found that “in a significant minority of schools, notably those that are their own admissions authorities ... a variety of criteria are used which appear to be designed to select certain groups of pupils and so exclude others. These include children of employees; children of former pupils; partial selection by ability/aptitude in a subject area or by general ability; and children with a family connection to the school.” While the School Admissions Code was introduced in 1998 to prevent this, a recent review (DCSF, 2009b) found that a “significant minority” of schools were failing to comply fully with its stipulations. A strengthening of the code (DCSF, 2009c), and measures such as the introduction of Choice Advisers to work with parents, aim to tackle these difficulties and an evaluation of the Choice Advice service (Stiell *et al.*, 2008) found that this could play a “small but important” part in making the school admissions process fairer and easier to navigate.

¹⁸ Value-added analysis uses longitudinal data to control for prior levels of achievement.

average baseline was high (Sammons and Smees, 1998; Strand, 1997, 1999; see also Mortimore *et al.*, 1988; Tizard *et al.*, 1988). In general, the differences between these groups tend to increase, rather than decrease, over time (Strand, 1999).¹⁹

Consistent with the review of literature above highlighting the particular importance of prior achievement, longitudinal studies of performance across primary and secondary phases also reveal the strong and persistent links between attainment in primary school and GCSE results nine years later. Goldstein and Sammons (1997), for example, estimate that the impact of primary schools on students' attainment at age 16+ is substantially larger than the impact of their secondary schooling (see also Sammons, 1995; Sammons *et al.*, 1995), highlighting the importance of early education on later attainment.

Several other studies have examined the combined impact of different educational settings. Findings from the Effective Pre-school, Primary and Secondary Education project (for example, Sammons *et al.*, 2007) consistently indicate that pre-schools can play an important part in combating social exclusion and promoting inclusion by offering disadvantaged children a better start to primary school. Some of the most recent results demonstrate the particular influences of combined pre-school and primary school effects in shaping children's educational outcomes. These results indicate that attending a better pre-school and a more academically effective primary school, as rated by independent national assessments, improves cognitive outcomes substantially, with low ability students showing particular gains. Children attending higher quality or more effective pre-school settings showed better educational outcomes in mathematics and reading at the end of Year 5 (aged 10), controlling for the possibly confounding influences of family background.²⁰ Conversely, children who attended low quality pre-school settings did not show the same continued gains and, in contrast to earlier research suggesting benefits of all pre-school experience, did not differ from those who did not attend pre-school at all. These findings indicate that attending high quality or more effective pre-school seems to act as a moderate-to-strong protective factor for children who go on to attend a less academically effective primary school (see also Mortimore and Whitty, 2000). As the children in the EPPSE study move through secondary school, it will be interesting to note whether similar patterns also appear, whereby later educational experiences counteract earlier negative ones.

Single-sex schooling

As noted above in the section on gender differences in achievement, girls outperform boys not just in England but in many other countries (OECD, 2006) despite coming

¹⁹ Note, however, that Strand (1999) finds no evidence of significant differential school effectiveness in relation to socioeconomic disadvantage, ethnic group or gender.

²⁰ The effect is similar in size to the impact of having a high rather than a low home learning environment or a mother with the highest level of educational qualifications (a degree or above).

from similar backgrounds and largely attending the same schools. Spielhofer *et al.* (2004) further demonstrate that girls do somewhat better in single-sex than in mixed-sex schools. However, the question of whether single-sex schooling has any impact on academic outcomes remains highly contested (Sullivan *et al.*, 2008). Reviews here highlight that there are very few such schools in the state sector – nowhere near enough to make a robust assessment of whether they do actually encourage better performance for either sex – making genuine comparison problematic. Moreover, there are few studies with adequate data to control for such differences and make comparing like with like possible (Mael *et al.*, 2005; Smithers and Robinson, 2006).

A recent study by Sullivan *et al.* (2008) uses longitudinal data from the 1958 National Child Development Study (NCDS) to counter such problems and finds that single-sex schooling is positive for girls at age 16, but neutral for boys, while in terms of the highest qualification achieved by age 42 the effects are neutral for both sexes. However, the authors do find that single-sex schooling is positively linked to the attainment of qualifications in ‘gender atypical’ subject areas for both girls and boys, that is, girls who attended girls’ schools were more likely to achieve more mathematics and science passes than co-educated girls, and boys in boys’ schools were more likely to achieve more passes in English and modern languages. Interestingly, this differentiation in subject-specific attainment carried over into later life with women who went to single-sex schools more likely to gain post-compulsory qualifications in male-dominated disciplines.

The authors argue that parental choice with respect to single-sex schooling – typically seen as good for girls and bad for boys – further complicates the selection issues discussed above, leading to a situation “that few would regard as socially optimal”, since more girls-only schools would necessarily mean fewer girls in co-educational schools, raising further complications. Expansion of single-sex provision thus needs to consider carefully the unintended consequences this possible policy lever may have.

There is, however, no evidence to suggest that the teaching strategies adopted in single-sex schools are better than those in co-educational settings (for example, Younger and Warrington, 2003), although there is some empirical support that boys are more likely to respond positively to lessons that have a clear structure (Ofsted, 2003) and negatively to poor teaching through disengagement, indifference or disruptive behaviour (OHMCI, 1997). Lavy and Schlosser (2007) also note that the more males there are in a co-educational class, the worse both sexes fare academically. When combined with the gender gap observed at all points throughout schooling, many argue in favour of single-sex classes in co-educational settings as a way of narrowing the gap between boys’ and girls’ achievement. Several studies, however, have assessed the impact of such classes finding largely inconclusive

results, arguing that much depends on the context in which single-sex classes are introduced and how resources are re-allocated (Younger and Warrington, 2006).

Ability-grouping

Ability-grouping practices are often justified by a person-environment fit perspective – that is, the match between an individual and their environment, based on the assumption that individuals are likely to learn more effectively and be more motivated to do so if the material can be adapted to capture their own level of competence. Indeed, the government’s White Paper *Excellence in Schools* (DfEE, 1999) states that “Unless a school can demonstrate that it is getting better than expected results through a different approach, we do make the presumption that setting should be the norm in secondary schools” (p.38) and the Green Paper *Schools: Building on Success* (DfEE, 2001) recommends “further increases in the extent of setting within subjects” (p.51).

However, much of the available evidence suggests that the effect of ability-grouping on pupil attainment is limited and no firm conclusions can be drawn from its use (Ireson *et al.*, 2002; Kutnick *et al.*, 2006). Using integrated, comparative case studies, for example, Kutnick *et al.* (2006) found that pupils in the case study schools were always found to be seated or working within some sort of grouping in their classroom. However, the effective use of pupil groupings within classrooms was often limited by conflicts between pupil group size and/or composition, assigned learning tasks and interpersonal interactions. In another example, Fogelman (1983; Fogelman *et al.*, 1978) uses rich, longitudinal information from the NCDS to control for other individual and school level factors that may otherwise impact on pupil attainment. Results showed little difference in performance in standardised tests of achievement in mathematics or reading when earlier attainment was controlled for, but suggested that in comprehensive schools with mixed ability grouping practices, a higher proportion of lower attaining students were entered for national examinations. Ireson *et al.* (2002) use multilevel analysis of data on Year 9 students and find effects for mathematics but not for English or science. Their results show that students attaining higher levels at the end of primary school make more progress in sets, whereas students attaining lower levels progress more in mixed ability classes. International reviews also indicate mixed findings (Ireson and Hallam, 1999; Kulik and Kulik, 1982, 1992), with Slavin (1990) concluding that the effect of ability-grouping on academic attainment was essentially zero.

Ability-grouping practices may in fact widen gaps in attainment; students assigned to high-ability streams do better than in mixed-ability groups while placement within low-ability groups has a negative impact on pupil attitudes to school and motivation (Feinstein and Symons, 1999, see also Gamoran and Berends, 1987; Oakes, 1985). Robertson and Symons (2003) examine the effect of ability streaming on children’s outcomes and show that children placed in the top streams within a school show gains, whilst being placed in the bottom has a negative effect on improvement in

mathematics and reading between the ages of 7 and 11. Summers and Wolfe (1977) show similar interactions in the individual ability and the mix of the peer group, finding positive effects for lower-ability pupils mixed with more able peers, but finding no effect for those already doing well.

Structured ability practices may also compound the effects of social composition and gender differences; evidence suggests that low ability groups tend to include disproportionate numbers of students of low socioeconomic status, ethnic minorities, boys and those born in the summer (Hallam and Toutounji, 1996). Furthermore, students in lower ability groups may be yet further disadvantaged because they are frequently provided with an inferior education experience and diminished support (see Ireson and Hallam, 2001). With social and behavioural factors, gender mix, class size and teacher availability, as well as individual attainment, affecting how students are grouped and inconclusive evidence, ability-grouping remains a contentious issue. Ireson *et al.* (2002) conclude that:

“If children are incorrectly placed in ability or attainment groups, they are likely to remain [there]. Placement error could have considerable long-term effects, particularly for children placed in low groups, limiting their chances of attaining higher grades in examinations.” (p.312)

Resources

A large body of research fails to find compelling evidence that simply giving more money to schools makes a difference to overall levels of pupil attainment (see Hanushek, 2004; Vignoles *et al.*, 2000). Some empirical studies do show a small but significant association between higher levels of expenditure per pupil and higher levels of achievement (Pugh *et al.*, 2008; Holmlund *et al.*, 2008; Steele *et al.*, 2007; Levačić *et al.*, 2005). The most recent of these (Pugh *et al.*, 2008) found that these effects were greater in schools showing moderate disadvantage (in quartile 3 for FSM where quartile 4 was the most disadvantaged), and similarly Holmlund *et al.* (2008), in considering additional expenditure at KS2, found the effects to be larger in less advantaged schools, though only in English. However, research in the area of resourcing in schools is particularly plagued by problems of attributing causality. Differences in funding, for example, tend to be skewed by low achievement at the level of the school, since schools in deprived areas, or with high proportions of children eligible for FSM, receive more funding, but also tend to have children who attain less well. Problems disaggregating levels of expenditure per pupil also lead to difficulties interpreting results and create aggregation bias concerns (Vignoles *et al.*, 2000). Chevalier *et al.* (2005) also highlight problems measuring and modelling the impact of the typical features of per pupil expenditure such as teachers' experience, qualifications and pay. We thus focus on class size as a key aspect of resources.

Class size

One of the most researched questions in the literature exploring the influence of school resources is the impact of smaller classes on student outcomes. Reducing class sizes has the advantage of “being visible, easily understood and easy (but costly) to implement” (Chevalier *et al.*, 2005: 49) and has considerable lay support (although there may still be barriers in such issues such as the physical structure of some schools and the need for extra teaching staff). Indeed, private schools frequently capitalise on parents’ perceived advantage of this ‘benefit’ by advertising their lower class size compared with state schools. Much of the UK evidence, however, reports little or no impact of class size.²¹

There is some consensus that class size effects are most marked in the first years of school (Blatchford and Mortimore, 1994). Blatchford, Goldstein, Martin and Browne (2002), for example, demonstrated a clear effect of class size difference on children’s academic attainment after adjusting for possible confounding factors and found some differential effects for the initial low achievers in the case of literacy and for those eligible for FSM. Again, however, these results are for children in the early years of schooling and there is limited work demonstrating that these results persist over time or are found for older students (Blatchford, Basset, Goldstein and Martin, 2003). Interestingly though, these authors report in other work that class size differences are related to several aspects of classroom processes, including teacher-pupil interactions, pupil attentiveness and peer relations (Blatchford, Edmonds and Martin, 2003), teaching practices which are responsive, deliberate, and individualised (Blatchford *et al.*, 2002) and within-class grouping practices (Blatchford *et al.*, 2001).

The concept of ‘class size’, however, is not straightforward, particularly in secondary schools where there is movement between classes, altering their size and composition, on a daily basis. Estimating the effect of reductions in class size on student outcomes is further complicated by school selection and peer effects, since, as noted above, school quality and the level of resourcing is not randomly allocated. Moreover, schools which stream students by ability generally place those with greater learning difficulties in smaller classes in order that they receive more teacher attention and/or to prevent them disturbing more able students (Lazear, 2001). Iacovou (2001), for example, shows that throughout the school years, lower-ability students are allocated to smaller-sized classes. While her results show a positive association between smaller classes and attainment in reading, no significant differences were found for mathematics and there was no evidence of differential effects between different groups of children, either by gender or for children from more and less advantaged groups. Again, the relationship between smaller classes and higher attainment in reading was only found in the early years of school, holding through to age 11 only

²¹ Note however, the international literature on class size and pupil-teacher ratio effects presents a slightly more positive picture of the relationship between smaller classes and individual achievement (see for example, Angrist and Lavy, 1999; Case and Deaton, 1999; Krueger, 2003).

for girls, and for those from larger families. Investigations of pupil-teacher ratios yield similarly mixed results (see Chevalier *et al.*, 2005, for a summary of existing UK studies on the impact of class size and pupil-teacher ratios).

Allocation of resources

The government target is to increase the proportion of KS4 students achieving five A*-C grades (and equivalent), including GCSEs in both English and mathematics, to 53 per cent by 2011.²² Schools also face the floor level target of ensuring at least 30 per cent of their students get five good GCSEs including English and mathematics by 2011.²³ These nationally set targets for education are designed to help every child achieve their full potential throughout the course of school and in later life. There is, however, some evidence to suggest that the current system may create an incentive for schools to concentrate resources on boosting the performance of students just under the National Curriculum target levels in an effort to increase the numbers of children reaching this threshold. Where resources are finite, it is possible that this process – called ‘educational triage’ (Gillborn and Youdell, 2000) – could occur at the expense of the lowest performing students. Investigating this issue Burgess *et al.* (2005) find quantitative evidence that, as the number of “marginal” students in a school increases, low-achieving students lose out both in terms of the “value added” measure and their performance on the 5 A*-C measure, while the gain of marginal students is small. They conclude:

While the magnitude of these losses and gains is not that large, in terms of policy, we find that schools do respond to the short run incentives created by the measure used to assess school accountability, and that this response lowers the educational gain of the lowest ability students. This is not necessarily the effect desired by a government wishing to raise overall educational outcomes.

*(Burgess et al.,
2005: 4)*

While there is some qualitative examination of these questions (Golden *et al.*, 2002; West and Pennell, 2000; Wilson *et al.*, 2006), more quantitative evidence is required before we can confidently assess the entire impact of KS4 targets on how schools are allocating resources to pupils.

²² As discussed above, 47.6 per cent of pupils achieved five or more grades A*-C including English and mathematics at GCSE or equivalent in 2007/08 (DCSF, 2009a). This figure represents an increase of 1.3 percentage points from 2006/07.

²³ The original floor level target of 30 per cent was set for 2008 but this target was not met.

Part III: Leverages on low attainment

As we have seen in the preceding sections, low achievement in schools is not a simple issue and neither is it a simple one to remedy. Of the areas we have identified above, aspirations at the level of the individual, and resources at the school level appear to be the influences most clearly addressed by current and recent policy – although this is not to the exclusion of the other influences. The following section describes in more detail how some major policy initiatives are addressing both these and others of the factors we have identified (broadly in the same order as in the previous section), and, where it is possible to comment, points to evidence about their success, making suggestions about where attention could most usefully be focused in the future.

The individual

Aspirations

Young people's aspirations are an area of increasing focus for policy. This focus is demonstrated in the recent report, *Aspiration and attainment amongst young people in deprived communities* (Cabinet Office, 2008), itself taken up in the White Paper on social mobility, *New Opportunities: Fair chances for the future* (HM Government, 2009). In line with this interest, a number of initiatives that include raising aspirations among their aims are already in place or planned. Since these initiatives may have other primary aims than raising aspirations, and since some are yet to be fully evaluated, it is difficult to comment on their effectiveness in raising aspirations either independently or in conjunction with raising attainment; it is also not known whether these initiatives might combine to produce a general increase in aspirations among the generation of young people who experience them. However, the following section outlines what is in place, in the hope that further investigation and evaluation of this area will be fruitful.

It seems worth noting initially, however, that as a foundation for raising both aspirations and attainment, perhaps most crucial is that children and young people 'own' their education, understanding the purpose of what they are doing and how it can help them meet their goals in life, rather than seeing education merely as something that is 'done to' them. As discussed in the next paragraph, children and young people need to be supported to develop this awareness from their earliest years of schooling, before they have the chance to become 'turned off' from the idea of learning and certainly before the 14-19 phase. Ideally, parents, as children's first and most important teachers, are best placed to help this happen: this has implications for how parenting programmes might work (see section on parental aspirations below). However, where parents do not or cannot offer this support, the presence of another trusted adult who can take an interest in the child or young person's development, and help them to do the same, will be necessary.

Raising the aspirations of young children

The desire to raise aspirations is perhaps most clearly shown in the Education and Skills Act 2008, which increases the age of compulsory participation in education and training to 17 by 2013 and 18 by 2015. However, in his Foreword to an information booklet about the new measures (DCSF, 2007b), Secretary of State for Children, Schools and Families Ed Balls goes some way towards recognising that legislation alone is not enough: “We need to raise the expectations and aspirations that we have for our young people and that they have for themselves. Legislating now means that we can build expectations early on with those young people who will be the first to benefit as well as with their teachers and parents.” As noted above, this very early building of aspirations, as a foundation for raising the participation age, will be crucial for the legislation to be successful: while the law can ensure young people’s presence in education or training, it cannot make them want to learn. Measures like the “early careers interventions” projects for KS2 promised in *The Children’s Plan* (DCSF, 2007a), in order to “extend[] horizons and rais[e] aspirations”, could therefore be significant.

Measures already in place to help build young children’s aspirations include the Social and Emotional Aspects of Learning (SEAL) programme, operating in around 80 per cent of primary schools and 30 per cent of secondaries. This takes “Going for Goals!” as one of its themes, focusing on motivation (including setting and reaching goals) and self-awareness. Evaluation (Humphrey *et al.*, 2008) of small-group work with targeted students (i.e. not of the universal programme) has found that the Going for Goals theme was associated with “increases in staff-rated self-regulation, decreases in staff-rated peer problems, and increases in pupil-rated empathy, self-regulation, social skills and overall emotional literacy”, although whether these improvements indicate increases in aspirations is not clear. An earlier evaluation which did include the universal programme (Hallam *et al.*, 2006a) also found improvements in children’s confidence and attitudes towards school, although again it is unclear whether or not these included aspirations. As evaluation of SEAL in secondary schools is now underway, the programme’s impact on aspirations could be an area for further investigation.

The Gifted and Talented programme aims to combat potential low attainment by raising the aspirations, motivation and self-esteem of the children and young people who are either most academically able or are talented in other ways – particularly those from the most disadvantaged backgrounds – in both primary and secondary schools. Evaluation of the National Academy of Gifted and Talented Youth element of the programme (ACL Consulting, 2009) has found qualitative evidence that it has helped to raise children and young people’s aspirations, but this is difficult to show quantitatively – as are any improvements in attainment – because the necessary methodology was not in place when the Academy was established. The evaluation also notes that some schools have been unwilling to put forward students for

participation in the scheme. Meanwhile, concerns have been raised that only seven per cent of students identified by schools as being gifted or talented are in receipt of FSM, compared with 14 per cent nationally.²⁴ It is possible, therefore, that the scheme has the potential to increase rather than narrow the gap in attainment between disadvantaged pupils and their peers.

Raising the aspirations of older students

Aimhigher is a programme also working in both primary and secondary schools, but focusing on encouraging young people to aspire to university. It works through partnerships of schools, universities and other institutions, in order to target young people from backgrounds currently under-represented in higher education. While the national evaluation of Aimhigher has not yet been completed, the evaluation of Aimhigher: Excellence Challenge, a programme now incorporated into Aimhigher, found that having opportunities to discuss university life with undergraduates increased aspirations regarding higher education among young people taking part in the programme (Morris and Rutt, 2006). As regards attainment, participation in the programme was associated at KS3 with an improvement of 4.6 percentage points in the proportion of year 9 students attaining levels 4, 5 or 6 in Mathematics, and at GCSE with an improvement of 2.5 in total points score (Emmerson *et al.*, 2005).

As noted above, it is difficult to ascertain causality in these cases, as participation in the activities was voluntary and it may be that the students who chose to take part in the programme were more motivated than their peers. However, the evaluation found that particular elements of the programme seemed to be key: visits to universities were not only associated with an improvement in GCSE total points score, but provided a transformative “moment of vision”, enabling young people to “make a conceptual leap about their ability to function in such an environment” (Aimhigher Practitioner website;²⁵ Morris and Rutt, 2006). While Aimhigher is aimed specifically at raising aspirations with a view to higher education, it may be that elements of the programme such as these visits, which allow young people to see themselves in a future role, could be broadened to encourage those young people for whom higher education is unrealistic to aim at further education or careers that they might not otherwise have considered. A further important element was thought to be the provision of a learning mentor for young people in low-performing schools: these young people were one and a quarter times more likely to attain five or more GCSEs at grades A*-C than those in similar schools without a mentor. The “individually-focused support which mentors bring and the different perspectives they offer” were thought to be key to this success.

²⁴ www.libdems.org.uk/home/more-gifted-pupils-from-deprived-backgrounds-must-be-recognised-to-be-helped-laws-23913;show Accessed 07.04.2009.

²⁵ Aimhigher Excellence Challenge: Key Findings.

www.aimhigher.ac.uk/sites/practitioner/programme_information/monitoring_and_evaluation/archive/aimhigher_excellence_challenge.cfm Accessed 07.04.2009.

The high quality, “impartial information and advice on learning and careers options” that *The Children’s Plan* requires schools to provide might also be a means of raising young people’s aspirations, particularly if it is well tailored to the individual and can be flexible to their needs. One of the most likely sources of this support is the personal tutor for every young person also proposed in *The Children’s Plan*. This tutor, it is envisaged, will be a member of school staff who knows the young person well in the round, and who, among other things, can talk to them about career aspirations and how to achieve them. While this is a laudable aim, it might be best fulfilled if it is not reliant solely on teaching staff, not all of whom will have the capacity to provide the supportive relationship that some young people need – particularly if they lack parental support. Rather, if others who work with young people, such as those supervising extended school activities, youth workers, mentors and even peer mentors working as role models, are able to empower young people to develop and realise their aspirations, the aim is more likely to be reached.

Participation in positive activities may also play a role. *Aiming high: a ten year strategy for positive activities* (HM Treasury/DCSF, 2007) proposes participation in positive activities as a way of increasing aspirations: “Participation in positive activities also protects against poor outcomes and helps counteract negative influences. It helps young people to feel good about themselves and their chances in life by developing their confidence and self-esteem, their motivation and aspirations.” These activities are accessible to young people both outside of school and through extended school provision, giving a further, informal route by which schools can build a foundation for raising their students’ attainment. The Empowering Young People Pilot project, another proposal from *Aiming high*, gives disadvantaged young people the power to organise and influence the kinds of activities available to them. Its evaluation, due in 2009, will consider whether it has had an impact on young people’s engagement with education.

Whole-school culture and wider measures to raise aspirations

The culture of a school will have a bearing on young people’s attitudes to their own attainment and to what they feel able to aspire to. If schools consistently put across the message that anyone can make a success of their life if they invest the effort, that scoring disappointingly in an assessment does not mean that one is unable to learn and improve, and that intelligence is not something that is ‘fixed’ but something that can be developed (Dweck, 2007, in Duckworth *et al.*, forthcoming), it is likely that students will be motivated to improve their attainment.

There are also structural measures, such as the increased flexibility in the curriculum for 14 to 19-year-olds, and the introduction of elements such as Enterprise Education, which aim to raise engagement with school for a wide range of students, to inspire creativity and to raise aspirations by broadening the areas of learning in which students can achieve. Meanwhile, evidence from the Building Schools for the Future

programme (PriceWaterhouseCoopers LLP, 2008a) suggests that young people feel that having new school buildings raises their aspirations.

The Education Maintenance Allowance (EMA) is another measure through which the education system aims to increase people's aspirations and engagement with education, and is one that has been rigorously evaluated. All young people in England are entitled to claim EMA for up to three years after they finish compulsory education: if they live in a household with an income of £30,000 or less, they receive £10, £20 or £30 per week that they remain in education. The pilot programme was found to have increased participation in education at age 16-17 by 5.9 percentage points (Middleton *et al.*, 2005), while students receiving EMA were more likely to stay in their courses than similar students not receiving the allowance, with those from the most deprived areas achieving at higher rates than their peers (Aitken *et al.*, 2007, quoted in Lupton *et al.*, 2009). It was estimated that just over half of those staying on in education and receiving EMA would otherwise not have been in education, employment or training (Dearden *et al.*, 2005 quoted in Lupton *et al.*, 2009), indicating an increase in their aspirations. The allowance was also found to have measurable effects on achievement: for example, the evidence suggests that, for both males and females, average A Level performance at age 18-19 was improved by around 4.5 per cent, with the effects being concentrated among young people from the most deprived backgrounds (Chowdry *et al.*, 2007).

Prior achievement

Research is clear that the early and primary years of education lay the foundations for later attainment, and in the light of this, significant investment and attention has been focused on developing the Early Years Foundation Stage and the Primary National Strategy, with official statistics indicating that standards of attainment in KS2 national tests have risen over the last decade. In schools with high proportions of children eligible for FSM (where attainment tends to be lower than in 'all maintained mainstream schools'), the pattern is roughly similar, although from a lower starting point: analysis for the years 1998-2004 found a slight closing of the attainment gap at school level, but a slight increase at pupil level (DfES, 2005c).²⁶ In addition, extra measures such as Every Child a Reader and Every Child Counts aim to ensure that fewer children fall behind because of problems with basic literacy and numeracy, but rather leave primary school well prepared for KS3. The long-term impacts on attainment of these recent programmes, as well as of other recent developments, such as the new KS3 curriculum, which allows more flexibility for schools, and the introduction of 'catch-up' tuition in English and mathematics, remain to be seen.

The first years of education do not necessarily set the pattern for the whole of life, however, and it is important that high quality educational opportunities are available

²⁶ For more recent analysis see The Poverty Site, Educational Attainment at Age 11, using DCSF performance tables 1997-2007. www.poverty.org.uk/25/index.shtml Accessed 07.04.2009.

throughout childhood and adolescence to build in meaningful ways upon earlier learning. This is particularly important as children go through the transition from primary to secondary school: Ofsted has expressed concern that this stage is often accompanied by a slowing down of progress (Office of Her Majesty's Chief Inspector of Schools, 2002), and international evidence suggests that children from families of lower socio-economic status are particularly vulnerable to such a 'dip' in attainment (Qualifications and Curriculum Authority, 2008). Measures to smooth this transition, then, might prove valuable for later attainment, particularly if they promote the experience of education, for both students and teachers, as a single, coherent process, and prioritise the needs of the child rather than the structure of the school system. Closer collaboration between primary and secondary schools is the most obvious way to accomplish this. Specialist Schools (around 90 per cent of secondary schools) are already obliged to work with local primary schools, an activity identified as common to successful secondary schools and promoted as part of the Extra Mile project (DCSF, 2008b). Evaluation of this element of practice within High Performing Specialist Schools (PricewaterhouseCoopers LLP, 2008b) found that collaboration has generally led to the development of good working relationships between schools, although the associations of this with attainment were not investigated. There are, of course, many measures that secondary schools are taking to ensure a smooth transition period and enable their new students' prior achievement to be swiftly built upon: for example, by operating a small 'school within a school' system for the new students, or by linking older students with younger students as 'buddies'.

The recent emphasis on personalised learning, defined by the then Department for Education and Skills (DfES) as "focusing in a more structured way on each child's learning in order to enhance progress, achievement and participation" (DfES 2006e), and tailoring support and challenge to children's needs, interests and abilities has brought a new focus to ensuring that every child and young person makes the progress that they are able to both in primary and in secondary school, rather than focusing on reaching a certain level at a certain time. In particular this means an expectation that every child will progress two national curriculum levels within each Key Stage. Personalised learning remains contentious as a concept, however, and is perhaps best thought of as a constant challenge rather than a state to be reached (Hargreaves, 2008).

Nevertheless, the progress in attainment of individual students, year groups and schools is becoming easier to monitor through increasing sophistication in the use of data, such as via the RAISEonline data analysis system. This allows schools to identify the levels at which their students are performing, and the range within which they might be expected to perform in future given their prior attainment and contextual factors, meaning that they can set targets and monitor progress at pupil and school level. The DCSF publication *The Extra Mile: How schools succeed in raising aspirations in deprived communities* (2008b) lists tracking students' progress, and intervening promptly "if they fall off trajectory", as one of the ways in which some

schools are succeeding despite challenging circumstances. The effectiveness with which data is used will depend on the individual school and, specifically, on its leadership. If the leadership is committed to the thoughtful use of data analysis, alongside an approach which takes into account what will help each individual child or young person to achieve at their best, this could prove an effective tool in helping to raise attainment.

Behaviour and attendance

Behaviour and attendance have been recognised to relate to attainment, but this is a complex area with unclear directions of causality, as noted in Part II. Reasons for poor behaviour and attendance vary between individuals and between schools, meaning that a wide variety of strategies have rightly been introduced. Furthermore, initiatives to address these issues have not necessarily been evaluated in terms of their effects on attainment, making detailed commentary here difficult.

Nevertheless, the government has put in place a national behaviour and attendance strategy to address the issues centrally, and its Behaviour Improvement Programme has been subject to evaluation (Hallam *et al.*, 2005). This programme has a focus on reducing truancy and improving attendance, including through the provision of key workers for all students at risk of exclusion, truancy and criminal behaviour. Its evaluation concludes that there are measures that schools can take to deal with these issues, and indeed that whole-school approaches are needed: “Improving behaviour in school depends on addressing a range of inter-related issues at the whole-school level, in the classroom, and in relation to individual students. Evidence suggests that schools with high levels of communal organisation, adopting a whole-school approach, show more orderly behaviour” (Hallam *et al.*, 2005: 4).

Individual elements of the behaviour and attendance strategy have also been evaluated. Behaviour and Education Support Teams (BESTs) are multi-agency teams of education, social care, health and other professionals, which work with children who have, or are at risk of developing, emotional, behavioural and/or attendance problems. Evaluation (Halsey *et al.*, 2005) found qualitative evidence that the teams were associated with positive changes in attainment, attendance, behaviour and wellbeing, but that this seemed to rely on a foundation of child and family wellbeing preceding improvements in behaviour and attendance, which were only then followed by improvements in attainment. In addition, very few BESTs monitored attainment specifically: staff members tended to feel that the primary focus of the programme was on wellbeing and behaviour, with any improvements in attainment constituting a secondary benefit. Since the approach of BESTs is to work with whole families, improvements in parenting skills and improved links between home and school were also noted. The holistic nature of the approach to the child and parents’ needs, with the involvement of appropriate professionals, was thought to be critical to the teams’ success.

The SEAL programme also forms a part of the behaviour and attendance strategy, since the skills it addresses are thought to underlie positive behaviour (Humphrey *et al.*, 2008). Evaluation of the programme as part of the Behaviour and Attendance Pilot concluded that SEAL had had “a major impact on children’s well-being, confidence, social and communication skills, relationships, including bullying, playtime behaviour, pro-social behaviour and attitudes towards school” (Hallam *et al.*, 2006b:1). The continuing roll-out of the programme is, therefore, to be welcomed, and could offer the opportunity for the effects of a behavioural intervention on attainment to be evaluated.

A further recent measure in this area is the Government-commissioned Review of Behaviour. This has emphasised the important link between learning and teaching and behaviour, recommending that all schools have a written policy on learning and teaching, and make use of Assessment for Learning strategies (Steer, 2009). Other concerns raised by the review are the need for improved transitions between Key Stages, and the need for consistency in raising standards for students with special educational needs. One of the review’s conclusions is that “There is no single solution to the problem of poor behaviour, but all schools have the potential to raise standards if they are consistent in implementing good practice in learning, teaching and behaviour management” (Steer, 2008: 9).

In consideration of the issues of behaviour and attendance, two major themes identified in preceding sections come again to the fore. One is the need for young people to be supported to ‘own’ their education: “It is ... important for schools to nurture a sense of rights and responsibilities in school cultures. In the longer term, students need to internalise the need for responsible behaviour and value it for the benefits which accrue to themselves as well as others.” (Hallam *et al.*, 2005: 4). The second is the crucial role of school leadership in setting the school’s culture. Sir Alan Steer states in the *Behaviour Review* (2008), “It is my view that the development of collegiate professionalism with regard to consistent good practice in schools would have the most significant impact on achievement and behaviour standards” (p.8). Therefore, since the reasons for poor behaviour and truancy can be multiple and complex, policies that are developed to address behaviour need to be flexible to be adapted by those who know their students and their contexts best.

Gender and ethnicity

While gender and ethnicity are important influences on attainment, clearly they give limited room for leverage in policy terms. Specific strategies can be implemented with specific groups of students but, as also noted in Part II, these will still face the need to deal with children and young people as individuals whose identity has many intersecting facets, of which gender and ethnicity are only two. However, the ‘gender gap’ between boys’ and girls’ achievement is well documented, while “White non-

FSM students – of both sexes – are more likely to succeed than their peers from Pakistani, Bangladeshi, Black Caribbean, Black African, Black Other and Dual Heritage (White/Black Caribbean) backgrounds” (Gillborn, 2008). Some have noted that these non-FSM students make up 86.6 per cent of the cohort, and that although White FSM students, especially boys, do tend to have particularly low achievement, the issue of entrenched low achievement by students from some ethnic minority backgrounds should not be overlooked (Gillborn, 2008).

In terms of gender, strategies include single-sex schooling – which will always be a matter of individual preference for families, whatever its effects on attainment²⁷ – and, within the school, similarly controversial measures such as dividing boys and girls for certain subjects; more informal initiatives such as “Boys into Books”, which promotes a love of reading to boys, and finding ways of attracting girls to subjects such as science and technology, in which they have traditionally been under-represented, may also have impacts on attainment that may nevertheless be difficult to measure. Policy is addressing gaps in achievement through the DCSF’s Gender Agenda initiative in 2008/09²⁸, which aims to raise awareness of gender achievement issues, bring together research findings and facilitate action research, and disseminate good practice. Although the initiative is yet to issue its final report, an interim report suggests that gaps in achievement “can be closed in primary schools and narrowed in secondary schools if certain, pedagogic, individual pupil approaches and whole-school approaches are followed” (DCSF, 2008c). These gaps appear in various ways: girls outperform boys in English at all Key Stages, for example, but boys have higher achievement than girls in KS2 mathematics. Successful strategies for closing gender gaps involve intervening early (such as through the Every Child a Reader programme: see Burroughs-Lange, 2008) and engaging with students’ own interests and giving them choice (in reading and writing). Whole-school strategies for raising boys’ achievement include praise and rewards for achievement, giving students a voice and valuing their opinions, and having a school ethos that expects boys to achieve and in which “gender constructions are less accentuated” (Skelton and Francis, 2008 in DCSF, 2008c: 11). Gender stereotypes in teachers’ perceptions may also need to be tackled, for example around use of ICT.

In terms of ethnicity, attention has been paid to the attainment of particular ethnic groups in line with the statistical breakdown of test results by ethnicity. This has led, for example, to specific interventions such as the Black Pupils’ Achievement Programme, building on the African Caribbean Achievement project, which aimed to help schools develop a whole-school approach to raising the achievement of African Caribbean students. Strategies included monitoring achievement by these students, developing more inclusive curricula, instituting training regarding race equality and African Caribbean students’ needs, and introducing mentoring programmes.

²⁷ Sullivan *et al.* (2008) for example note that there is a particular demand for single-sex schooling for girls among parents from certain minority ethnic groups.

²⁸ See www.teachernet.gov.uk/wholeschool/equality/genderequalityduty/thegenderagenda Accessed 07.04.2009.

Evaluation (Tikly *et al.*, 2006) found evidence of inequalities affecting African Caribbean students regarding ability setting and streaming, test and examination tier entry, exclusion from school, and entry into the Gifted and Talented programme; some of these inequalities also affected other groups, particularly Pakistani boys. The main reason for these inequalities seemed to be the fact that students were allocated into groups on the basis of prior academic achievement (for example, using end of KS2 results to sort students into ability groups at KS3, which had a relationship with the tiers of test papers for which they were entered at the end of Key Stages 3 and 4, and therefore with results they could achieve). The authors make the point out that while secondary schools may, therefore, be attempting to treat all students in the same manner, the way in which students are selected for certain groups may reinforce the prior low achievement of African Caribbean students in primary schools. Furthermore, an “overwhelming majority of both high and low achieving African Caribbean students indicated that they were aware of the lower academic expectations that some teachers had of them” (Tikly *et al.*, 2006: 9).

The evaluation found evidence that results had improved for African Caribbean students in Aiming High schools, and that there was some closing of the gap in performance. Mentoring was found to be an especially effective strategy for improving achievement. However, this was not consistent in all schools, some of which were yet to comply with their legal duty to address race equality. Engaging with parents of African Caribbean students was found to be an area of particular challenge, with parents themselves reporting frustration in their attempts to become involved in their children’s schooling. Establishing Black parents’ groups, curriculum workshops for parents, and new methods of home-school communication were some strategies that schools used to seemingly good effect. The evaluators recommend that schools should start to target support at African Caribbean students in Key Stages 1 and 2, and that this should be coordinated throughout all Key Stages and linked to initiatives that target other groups. A school coordinator should champion achievement for groups at risk of low attainment, and objectives for raising the attainment of low achieving groups should become part of performance management for senior managers.

A further initiative is the recent publication of guidance on *Raising the attainment of Pakistani, Bangladeshi, Somali and Turkish heritage pupils* (DCSF, 2008d). This guidance emphasises the key points raised above regarding the importance of school leadership in setting the school’s ethos and in identifying and meeting the needs of its students, including through the use of data analysis; it also addresses the issues of students having English as an additional language and professional development for staff. With more indirect links to attainment, yet still with raising aspirations and attainment as express aims, programmes such as REACH have been established. Initiated in response to the REACH report (DCLG, 2007), this aims to provide positive role models for young Black men, as well as to improve links between Black

families and schools, and improve reporting on race equality in schools. No evaluation of this initiative is yet available.

Meanwhile, Mongon and Chapman (2008) are among those to raise concerns that White boys entitled to FSM tend to fare particularly badly in national tests, with their report setting out some characteristics common to schools and their leaders who have been successful in dealing with this issue. These include: the ability to build a strong vision for the school; a rapport, and sense of community, with staff and students; the ability to make detailed use of information about student progress and teaching standards; and leaders' confidence in their own abilities and willingness to take responsibility for successes and failures.

It is important to recognise the fact that the impact of any intervention can vary significantly depending on the individual beneficiaries, as is illustrated in the case of the EMA. As described above, evaluation has found a positive effect on numbers of students remaining in education and, in many cases, on their attainment. This varies, however, by gender and ethnicity, as well as level of deprivation and prior attainment. For example, the impacts on *participating in education* at age 16 are concentrated among White males and females, for whom participation in the pilot areas rose by 2.9 and 2.4 percentage points respectively (Chowdry *et al.*, 2007). In comparison, there are no statistically significant impacts on the participation of Asian or Black students. However, the *attainment* of young people from ethnic minorities increased significantly in the pilot areas, particularly in the case of Black females. Furthermore, while both males and females in relatively disadvantaged areas had higher rates of participation and attainment, the results were weaker for males in the most deprived areas, possibly because these young men were more disengaged from education, or were "less well-placed academically to continue their education beyond 16". The poorest young people may also be more likely to have part-time work commitments that hinder studying. Meanwhile, the evidence also points to positive impacts for males with moderate prior achievement, possibly because they are more easily persuaded by the incentive of EMA to change their position. These findings demonstrate that a 'one size fits all' approach cannot be relied upon, and that assessment of the effectiveness of an intervention should take into account how its impacts vary.

Special educational needs

As noted above, the limitations of time and space do not allow us to cover this complex area in detail. However, Government is paying increasing attention to the needs of children with SEN, as indicated by its documents and strategies, which include *Removing Barriers to Achievement: The Government's Strategy for SEN* (DfES, 2004b), *Aiming High for Disabled Children* (HM Treasury/DfES, 2007) and most recently *The Children's Plan one year on* (DCSF, 2008a). The latter promises investment in pilot projects to raise expectations for children with SEN and help them

achieve their potential, along with measures such as embedding high aspirations for them in school leadership training.

It should be noted that policy directed at children and young people with SEN has implications for league tables and target-setting. When schools' contextual value added scores are not taken into account, schools that admit high proportions of students with SEN may find themselves placed disproportionately low down the tables, despite the good progress that these students may be making. The SEN Information Act 2008 may help here: it aims to ensure better information on outcomes for this group of children, with the goal of helping to raise attainment for them.

Looked-after children

Following concerns about the very low average levels of attainment of these children and young people, they are also a focus of increasing attention. For several years now schools have been obliged to nominate a 'designated teacher' to be responsible for all looked-after children attending the school, while more recent measures have included the introduction of 'virtual headteachers' for all looked-after children within a local authority, and more financial support for looked-after young people to go on to higher education. The recent *New Opportunities* social mobility white paper (HM Government 2009) guarantees all suitably qualified young people an Apprenticeship place at 17-18; for looked-after young people this applies until they are 25. While these kinds of structural changes are valuable, it seems that these young people in particular are most likely to benefit from the kind of support outlined in the 'Aspirations' section above, in the person of a trusted adult to help the young person to formulate and fulfil their plans for their life.

The family

Social background

While policy levers cannot alter the background that a young person comes from, they can seek both to make life chances more equitable for subsequent generations, and to use financial and other measures to compensate young people from disadvantaged backgrounds (these other measures might include raising aspirations, as outlined above, and increasing resources to schools in deprived areas, as set out below).

In terms of making society fairer, this is the express aim of *New Opportunities* (HM Government 2009), the White Paper on social mobility, produced in the wake of evidence that social mobility has stalled in recent decades despite large increases in investment in education (Blanden and Machin, 2007). The paper sets out measures to improve the economy, to support more people to gain better skills and move into better jobs, and to provide high quality childcare and education in the early years, as well as increasing investment in the school system. The school system is the object of

further focus in the recent document, *Breaking the link between disadvantage and low attainment* (DCSF, 2009f). This sets out five areas for action: raising the visibility of, and awareness about, issues connected with deprivation; the early years and parents; targeted support in the basics of English and mathematics; services beyond the classroom; and school and local authority accountability and funding.

The Government's commitment to combating child poverty, and to raising the skills of adults, for example through Skills for Life and family learning programmes for parents, are strategies that have had measurable success in their immediate goals. However, ascertaining cause and effect in trying to assess these issues is extremely difficult because of the multiplicity of factors and long timescales involved, and therefore the contribution of such strategies both to general social mobility and to the attainment of young people is difficult to ascertain. In terms of financial measures, the EMA has been associated, as indicated above, with both staying on in education among young people who might not otherwise have done so, and with increased attainment. While it is no doubt not the only initiative with these aims, it is certainly the most rigorously evaluated.

Home environment

The initiatives that relate to the home environment considered here are those that seek to support parents in developing their children's learning and skills. Awareness of parents' roles in their children's outcomes, and the provision of programmes to enhance parenting skills, have both increased rapidly over the last few years, and training on working with parents is now a standard element of teachers' initial training and professional development. Helping ensure that children can flourish in school is an important aim of much parenting provision, which tends to be focused on the early years, when it is easier to both offer and receive parenting support without stigma – although this is not exclusively the case.

Parenting support has most notably been available through Sure Start Local Programmes, now Sure Start Children's Centres. As well as providing childcare, these settings also offer parenting workshops and advice, in order to enable parents to build a good home learning environment, in the light of evidence from the EPPSE project (Sylva *et al.*, 2003) that parents can make a significant positive contribution to their children's development in this way, regardless of their own background and education. Home visits also allow staff members to engage with vulnerable families and model positive parenting behaviours in the children's own settings. The National Evaluation of Sure Start (see www.ness.bbk.ac.uk) is a valuable resource, demonstrating that it can be feasible to run a large-scale, detailed evaluation programme: this consists not only of a cost-benefit analysis of Sure Start, but also covers its impact on children and families, the implementation of the programme in terms of service delivery, a study of community level impacts, and support for local-level evaluations.

While such a comprehensive evaluation is a major undertaking and a considerable expense, it does have the advantage of providing high-quality evidence about the effectiveness of the policy it addresses: a strategy which, it can be hoped, will produce savings in the long run. The findings (National Evaluation of Sure Start, 2008) indicate that parents in Sure Start areas provide their children with a better home learning environment and a warmer parenting style than those in other areas, and that their children demonstrate better levels of independence and ability to regulate their own behaviour (which, as we have argued above, might contribute to attainment) – this apparently being related to improved parenting. However, the first Sure Start local programmes began in only 1999; the children who benefited from them will need to be followed for several more years if any influence of the programme on their attainment as young people is to be demonstrated.

The extended schools initiative is multi-faceted and includes help, advice and links with support services for parents, as well as providing extra activities for children. The evaluation of Full Service Extended Schools indicates that a school's participation in the initiative is positively associated with pupil attainment (Cummings *et al.*, 2007; Conlon [2009] also finds some positive associations at school level), although these links are not so straightforward as to mean that a pupil attending an extended school will achieve more highly than one who does not. The fact that extended schools activities have been running in different ways and for different lengths of time in different schools also makes the association difficult to measure at this point in time. Furthermore, a recent survey of parents indicated that pupils from more deprived backgrounds were less likely than average to be using extended schools activities, with cost sometimes proving a barrier (Wallace *et al.*, 2009), implying that the initiative may have more to do to narrow the gap in attainment between these pupils and their peers; in addition, many schools have reported that parental support services is an area that they find difficult to deliver adequately (Ipsos MORI, 2008). However, extended schools are also positively associated with a range of other outcomes, including family stability, helping families to manage their problems, and adult learning (Cummings *et al.*, 2007). These were strongest for students and families facing difficulties, and the wider outcomes may also have contributed to raised attainment, although the factors are difficult to pick apart.

Similarly, evaluation of Family SEAL (Downey and Williams, 2009), which involves parents in developing their primary school children's social and emotional skills, found positive impacts, particularly among children who were having social and emotional difficulties; parents reported some positive impacts on family relationships and greater self-awareness in their children, and teachers reported still greater improvements than the parents. This was a small study, however, and it was not known whether these apparent improvements were associated with the Family SEAL programme in particular or simply the result of parents being able to spend quality one-to-one time with their children and network with other parents.

The Government has put in place further measures aimed at improving children's home environments that have yet to be fully evaluated. Family-Nurse Partnerships, for example, offer regular home visits by a nurse to vulnerable young parents from before birth to when the child is aged two. This programme is based on a US model that has been thoroughly evaluated with randomised controlled trials. The evaluation (Olds *et al.*, 2007) has found benefits that persist until the child is aged 9, including higher achievement in school, and benefits for the mother, including longer intervals between births of first and second children, longer relationships with partners and less reliance on state welfare support. However, although the UK programme is being evaluated and although the results of the first year pilot projects are positive (Barnes *et al.*, 2008), it is not subject to randomised controlled trials in the same way, and furthermore has been expanded nationally before the evaluation has reported fully. The Parent Support Advisers pilot project, which works through primary and secondary schools, is also awaiting its final evaluation, but there is evidence (Lindsay *et al.*, 2008) to indicate that the advisers have helped to improve both parents' relationships with their children and the children's behavioural, emotional and social development; these factors may or may not have their own influence on the children's attainment.

Parental aspirations

While it is possible that much of the work with parents described above addresses parental aspirations, for example through promoting learning as a positive experience, it seems worth highlighting some specific effects associated with the Aimhigher approach. The evaluation of Aimhigher: Excellence Challenge found evidence suggesting that parental involvement in young people's decision making had the "potential for leverage even among young people in low performing schools" (Morris and Golden, 2005). For example, young people in Year 9 were found to be twice as likely to consider higher education if they believed their parents wanted them to stay in education. Those who at the age of 16 made a "negative transition" (i.e. were not in education, employment or training, or were in a job without training) were more likely to have had parents who encouraged them to get a job when they reached 16 (Ireland and O'Donnell, 2004²⁹). When parents expressed an interest in their children continuing in education, attended parents' evenings, and encouraged their children to talk about university, this was associated with an increase of around 12 percentage points in the probability of the children aspiring to university. Opportunities to discuss life at university with their family were associated with young people being just over one and a half times more likely to aspire to higher education.

²⁹ See also

www.aimhigher.ac.uk/sites/practitioner/programme_information/monitoring_and_evaluation/archive/aimhigher_excellence_challenge.cfm Accessed 07.04.2009.

Although engagement with parents could be difficult, successful events could be run with the help of: liaison with schools and learning mentors; careful selection of venue; providing clear, sensitively communicated information on the costs of higher education and financial support available in order to tackle fears about debt; and inviting undergraduates to talk about their experiences. While *New Opportunities* (HM Government, 2009) promises to ensure that “all children from low-income backgrounds with the potential to benefit from higher education will receive the mentoring, advice and support they need at secondary school to get into university”, in the light of the evidence for a link between parents’ aspirations and young people’s attainment, it seems that work with parents along the lines of Aimhigher could also be significant.

The school

Unlike some of the other influences that we have identified, many of the factors at school level that seem to be influences on young people’s attainment (for example, school choice within a quasi-marketised system, grouping by ability and target-setting) are also initiatives of policy that have been subject to evaluation. As such, these examples have already been discussed in Part II above, although certain measures currently being taken to address them bear mention here. First, however, we consider the effectiveness of some policy initiatives that have increased the resources available to schools, since this has been an area of prolific activity both in terms of programmes and of their evaluation; this is in itself noteworthy given, as outlined in the section on resources in Part II above, the inconclusive evidence surrounding the increase of resources as a strategy for raising overall attainment.

Resources

Area-wide: City Challenge

Extra resources may be devoted to schools on various levels: to a whole area, to a cluster of schools within an area, or to an individual school. City Challenge is a clear example of a multi-faceted attempt to raise young people’s attainment by targeting extra resources at a wide area. London Challenge, on which it is based, was launched in 2003, with aims that include bringing about a sharp drop in the number of the capital’s under-performing schools, and achieving significant improvements in educational outcomes for disadvantaged children. The initiative offers bespoke support for some schools in challenging circumstances, more intensive support for five key boroughs, help with teacher recruitment and retention, leadership programmes, out-of-school opportunities for students, data tailored to London’s needs, and programmes for underachieving groups and weak subject areas. In 2008,

the programme was expanded to cover Greater Manchester and the Black Country, as City Challenge.³⁰

In the case of London, while pupil attainment has risen since the initiative was introduced, finding evidence on whether this association is caused by London Challenge is difficult. The situation is complicated by the fact that the available reporting refers variously to London as a whole, Inner and Outer London, and the five key London Challenge local authorities. The only readily available evaluation of the initiative in terms of attainment in London schools takes the form of a presentation of statistics (Ofsted, 2006) showing mixed, although largely positive, results associated with the initiative: achievement at KS3 and 4 is rising faster in London than in schools nationally, and attendance is also more improved than nationally. For example, of schools where less than 30 per cent of pupils achieved five GCSEs at A*-C in 2003, 89 per cent of schools in Inner London improved between 2001 and 2005, against 73 per cent of all such schools. The evaluation concludes that overall, London schools have improved “dramatically”, with the investment in London Challenge having helped schools and local authorities to raise attainment. Schools in the key London Challenge areas are also doing better than other London areas in the Contextual Value Added (CVA) score (which measures students’ progress in comparison with similar students). No schools in London Challenge areas were significantly below the national CVA rate, and 67 per cent were significantly above it. The Ofsted document does not report on the percentage of students in London schools reaching the benchmark of five A*-Cs at GCSE (or equivalent), including English and mathematics.

Surveys have also been conducted of a large sample of London students and teachers, as well as a comparison group from other metropolitan areas, in the name of the London Challenge, potentially providing a rich source of data. The 2006 *London Challenge Survey of Pupils and Teachers* (Wilson, Benton, Scott and Kendall, 2007) reported that when asked whether they considered their school to be good and providing a good education, students’ responses in the five key London Challenge areas were more negative than those from other areas. This could perhaps be due to the relative deprivation of these areas, and/or a lower starting point, but since this is not commented upon, whether student perceptions have changed since London Challenge is difficult to ascertain; the 2005 survey shows similar results but the 2004 survey does not report responses specific to the five key areas (Ridley *et al.*, 2006; Addams and Johnson, 2005).

The headteachers surveyed for the Ofsted (2006) document reported many positive aspects of London Challenge, including the fact that involvement in the initiative

³⁰ The City Challenge programme is not to be confused with the National Challenge, which states that no school should have below 30 per cent of its pupils obtaining five GCSEs at grades A*-C including English and mathematics, or the equivalent, and which is discussed below.

seemed to create a climate for change, as well as the good support offered by advisers and other schools, and the payment of grants direct to schools. However, the heads also complained that the flow of extra resources tended to be stopped once a school was seen to be improving. It is difficult, then, to draw conclusions about the overall effectiveness of the initiative, and there may be some cause for concern that the programme has been extended in London, and rolled out to Manchester and the Black Country, without a full evaluation having been conducted.

Area-wide: Excellence in Cities

Excellence in Cities (EIC) ran from 1999 to 2006, using partnerships of schools and local authorities to raise standards in the deprived areas that it targeted. The programme consisted of several strands: Gifted and Talented; Learning Mentors; Learning Support Units; City Learning Centres; Beacon Schools (replaced by the Leading Edge Programme); Specialist Schools; and EIC Action Zones. These were later supplemented by further strands: Study Support, the Leadership Incentive Grant and the Behaviour Improvement Programme. Since 2006, EIC funding has been paid through local authorities to schools as part of their overall School Development Grant, and EIC has ceased to be a central programme. However, schools have been encouraged to form Education Improvement Partnerships, with a broader remit, and much of the work of the different strands of EIC has continued.

An evaluation (NFER, 2007) of EIC found that EIC closed the gap in attainment between deprived and non-deprived students when measured at the school level by the Income Deprivation Affecting Children Index (IDACI), although not at the individual level as measured by eligibility for FSM. This means that as school deprivation increased, the difference in average progress between a pupil in an EIC school and a pupil in a non-EIC comparison school also increased, such that the impact of school-level deprivation was lessened for pupils in EIC schools. However, while FSM pupils in EIC schools benefited from the initiative, they did not do so any more than their non-FSM peers in the same school. Whether this represents a success for the initiative depends on the kinds of improvements that were envisaged in the original aim of driving up standards. However, as indicated earlier in this report, given the multiplicity of home, peer and other factors that can affect an individual's performance, an entirely school-based initiative might struggle to achieve such a result in any case, and/or might have a profound positive impact on an individual that is shown in ways other than improved examination results.

It was, in fact, over time that the most positive changes associated with the initiative emerged. The first large-scale evaluation (Kendall *et al.*, 2005) found limited effects, and the programme received negative media coverage as a result. The greatest effect was found for maths at the end of KS3 in the most disadvantaged schools, and there were also some improvements in attendance. At KS4 there was little evidence to suggest that EIC students were making more progress than other students, and at KS3 the quantitative evidence did not suggest EIC added value to existing Specialist and

Beacon Schools programmes, or that EIC Action Zones were impacting on attainment. However, since per-pupil costs were low, the evidence suggested that EIC was potentially cost-effective in terms of long-term wage returns to individuals based on their performance at KS3. In addition, the staff interviewed were generally positive: although only a minority reported a direct impact on attainment, many noted the ways in which EIC was improving students' motivation to learn, and was creating a more favourable climate for teaching and learning. By the time that the second evaluation (NFER, 2007) was carried out, it was found that, on average, students in EIC schools were indeed making more progress at KS4 than other students. For example, in 2006, EIC pupils were 3.2 percentage points more likely to achieve five GCSEs at A*-C, including English and maths, than similar pupils in non-EIC schools. Similarly, the results of a more recent analysis of the effects of increased resources for schools (Pugh *et al.*, 2008) also suggest a general positive effect of EIC initiatives on GCSE results. This illustrates the need for policies to be allowed sufficient time to make an impact, especially when working with the most disadvantaged groups.

Individual schools

This section considers the effects of the Specialist Schools and Academies programmes, as the major programmes through which individual schools currently receive extra resources. The Specialist Schools Programme began in 1993 (as the Technology Colleges Programme), became part of EIC, and now covers around 90 per cent of secondary schools. Individual schools apply to become Specialist Schools, which entails working in partnership with private sector sponsors, supported by additional government funding. The aim is to promote school improvement by providing opportunities for schools to develop their particular strengths in their subject specialism, while driving up standards across the whole curriculum. The schools are also required to share their expertise and resources with partner schools and the wider community. Schools designated High Performing Specialist Schools (HPSS) have the responsibility of taking on a greater role in their communities and disseminating effective practice. Specialist Schools are often bracketed for consideration together with Academies, state-funded schools run by independent sponsors who are able to challenge traditional thinking on how schools are run. Academies often replace existing poorly-performing schools, in a bid to raise educational aspirations in their communities.

Evaluations of these programmes have produced mixed findings. The most recent reporting (Smithers and Robinson, 2009), which focuses on Specialist Schools with a science focus, found that Specialist Schools “add more value than non-specialist schools, but since adding value is part of the approval process [for gaining Specialist status] they would have been the more effective in the first place ... The longer a school had been specialist the more value it appears to add, but this was attributed to successive creaming off from a diminishing residual pool” (p.ii). This report also contains a detailed literature review of the existing evaluations of Specialist Schools, pointing out that the different approaches taken makes it hard to draw firm

conclusions: while Government-sponsored studies have tended to focus on the success factors behind effective Specialist Schools, independent reports have attempted to consider effects on attainment. Results have varied significantly depending on the results data used and the way in which ‘added value’ is measured. The report quotes an earlier review (Castle and Evans, 2006, in Smithers and Robinson, 2009), which found that “the majority of specialist schools are highly effective,” but, “whether this is due to their selection practices (overt and covert), or to being already highly effective in order to obtain specialist status is not clear”. Smithers and Robinson likewise question whether improvements in attainment in Specialist Schools are due to something intrinsic to acquiring specialist status or simply due to increased resources.

Concerns have also been raised about whether targeting resources on one particular school has unintended effects on other schools in the area, particularly with reference to the Academies programme. The most recent Government sponsored evaluation of the Academies programme (PricewaterhouseCoopers LLP, 2008c) finds a general positive effect of Academies on the attainment of their own pupils, with standards rising at a faster rate than the national average and “substantial improvements in performance”. However, another study (Curtis *et al.*, 2008) finds that, in the light of the original aim of the programme to raise achievement levels not only for Academy students but also for their ‘families of schools’ and the wider community, Academies are not doing enough to work with other schools in their areas. The impact on other schools of high levels of exclusions from Academies, and admissions practices that seem to have led to a fall in proportion of students receiving FSM attending Academies are cited as causes for concern. The authors suggest that cooperating with neighbouring schools in terms of admissions, exclusions and sharing of resources, participating in behaviour partnerships and utilising an area-wide banding system to ensure a fair intake of students would help to address these concerns. The report also calls on the Government to “revisit and refine” the objectives of the programme. Nevertheless, the official evaluation (PricewaterhouseCoopers LLP, 2008c) finds “no strong quantitative evidence that changes in the profile of Academy students have been at the expense of [schools with an overlapping intake of students]”. This report does however note that the “absolute levels [of improvement] still trail some important comparators”, and that variation between results achieved by different Academies, particularly in the light of the differing lengths of time for which they have been operational, make for “insufficient evidence to make a definitive judgement about the Academies as a model for school improvement” at this stage. From these mixed results, it seems that the debate over the efficacy of these programmes will continue.

Other school-level influences

Of the other policy initiatives aimed at the school level, targets are one of the most controversial, for reasons outlined in the section on allocation of resources in Part II above. However, measures are being taken to address concerns about a

disproportionate focus on young people reaching certain set standards: personalised learning, with its emphasis on maintaining a good rate of progression for each individual student, is one such; the increased flexibility of the 14-19 curriculum, along with the introduction of Diplomas (as set out in further detail in the paragraph below), the Foundation Learning Tier and increased numbers of Apprenticeship places, is another. This broadening of learning options can be seen as an attempt to engage more young people successfully in learning, while ensuring that they are still reaching good levels of attainment. Meanwhile, *Breaking the link between disadvantage and low attainment* (DCSF, 2009f) urges a focus on the very low-attaining pupils, and there are measures in place to bring about improvements in those schools that do not reach the targets, such as the National Challenge, which both ‘names and shames’ and offers extra support through a multifaceted approach to schools where less than 30 per cent of students gain the equivalent of five GCSEs at A*-C. It is as yet too early to evaluate the National Challenge’s effects.

The Diploma programme bears special mention as it constitutes a major reform to educational qualifications in England. A study of the development process for Diplomas found a “widespread concern about over-assessment” among stakeholders in the process (Ertl *et al.*, 2009: 5), echoing the more general concern about targets and assessment held by some. However, this study also praises the way in which employers and higher education institutions have been involved in the development of the qualifications, albeit with constraints on employers’ influence.

Although it is too early as yet to determine what effects the new ways of teaching and learning involved in delivering the Diplomas might have on patterns of attainment, initial evaluation (O’Donnell *et al.*, 2009) has found that Diplomas were broadly welcomed by the consortia of education providers and employers responsible for delivering them, and that although take-up had been lower than anticipated, this was expected to rise as the qualification becomes established. It is noteworthy that those in Year 11 intending to take a Diploma at Level 1 or 2 (and those in Year 9 considering taking one) tended to be those with lower than average prior attainment. However, these students also tended to have a positive attitude to school, and to be planning a work-based route after the age of 16. It was also found that some staff required additional support to deliver the programme, to engage with employers and, particularly, to advise learners, the majority of whom reported that they had not received key information about Diplomas; the report highlights a need for *all* staff in partner organisations, and parents, to have a much greater level of awareness about the qualifications, since they play a key role in guiding young people in their choices. This is particularly important in view of the lower prior attainment of candidates, mentioned above: without work to widen the range of those participating, there is a risk that the qualification could become stigmatised. The findings also point to the need for any new curriculum or qualification to be supported by good information, advice and guidance for young people, as well as information for the wider public and media to counter any negative perceptions.

Since teachers are on the front line of raising young people's attainment and shaping their attitudes towards learning, the quality of classroom teaching is another crucial factor to be borne in mind, as indicated at the earlier stages of education by the EPPSE project (see the section on choice, selection and school composition in Part II above). The financial incentives set out in the *New Opportunities* White Paper (HM Government, 2009), to attract and retain high-quality teachers in challenging schools, are one of the most recent measures to utilise this lever on attainment. The quality of school leadership will also influence almost everything else that goes on inside the school, and the way in which schools can work together to address wider concerns. Decisions about how best to implement initiatives aimed at raising attainment need to be taken by school leaders, who know their own contexts, and pupils, well. The DCSF publication, *The Extra Mile: How schools succeed in raising aspirations in deprived communities* (DCSF, 2008b) states that, in successful schools, "The choice of intervention approaches for those who need support is a collaborative process involving both senior and departmental leaders and the impact is regularly evaluated. Achieving a good fit of solution to need is key." This report contains many examples of good practice and illustrations of what can be done at a local level, among which the importance of strong leadership and management of schools is highlighted as a key factor. Likewise, the Leading Edge Programme, one of the continuing strands of EIC, is based on the "belief that the answers to some of the most intractable problems in education lie in leadership teams and not in tomes of top down guidance. It is the ability of schools to share experiences and practice at a deeper level that will ultimately transform schooling."³¹ A variety of other measures have been introduced to improve the quality both of classroom teaching and of school leadership, ranging from the Teach First programme to attract top graduates to teaching jobs to the training and development work carried out by the National College of School Leadership, but it may prove difficult to gather strong evidence about the direct effects of these on young people's attainment.

The wider environment

While many of the policy initiatives that cover wider areas (such as City Challenge, Excellence in Cities and Specialist Schools and Academies – since the latter are expected to work with their local communities) have already been discussed, New Deal for Communities (NDC) is a major initiative worthy of special mention. It complements the Government strategy *A New Commitment to Neighbourhood Renewal* (Social Exclusion Unit, 2001), which aims that within 10 to 20 years nobody should be seriously disadvantaged by the area in which they live, and provides for local partnerships to be set up to tackle a wide variety of factors contributing to neighbourhood deprivation. Measures to address educational attainment in NDC areas have covered the full age range, including the promotion of lifelong learning. Such wide-ranging approaches make evaluation of the programme's effect on attainment difficult, particularly since one area may be subject to several initiatives – for

³¹ www.ledge.org.uk/story_so_far.php Accessed 07.04.2009.

example, London contains 10 NDC areas, also covered by the London Challenge. However, some key findings are worthy of mention.

Evaluation of the programme between 2002 and 2004 (Centre for Regional, Economic and Social Research, 2005) found that educational attainment in NDC areas improved slightly, but that this was in line with comparator areas. Several factors might explain this: local partnerships have considerable freedom over the approaches that they take and, indeed, the priority that they give to educational outcomes and projects within their overall goals, making generalisation difficult; students living in an NDC area may attend secondary schools outside the area, and not benefit from school-based programmes, while schools in NDC areas may be attended by those from outside the area, making it difficult to judge impacts at the individual level; and, moreover, change takes time and is likely to take several years to become evident. The report suggests some key success factors for educational approaches, including employing local people in projects designed to raise attainment: this was thought to enable them to act as informal role models, demonstrating that people in the neighbourhood can take on serious roles in education. Later evaluation (Beatty *et al.*, 2008) also found that within the multifaceted NDC approach, place-based outcomes (such as attitudes to the area and fear of crime) seemed to be easier to influence than person-based outcomes, such as educational attainment and health. Nonetheless, between 2002 and 2005, the proportion of children achieving five or more GCSEs at grades A*-C increased by three percentage points more in NDC areas than the 'parent' local authorities.

The latter report acknowledges the debate about whether problems faced by those in deprived urban neighbourhoods are best addressed through area based initiatives and/or improvements to mainstream services. The evaluation seeks to identify the degree to which there are inter-relationships across different dimensions of deprivation, such as education, jobs, crime and health, and finds "strong and statistically positive relationships" across different dimensions of change. This includes a finding that scores for its 'community change' theme were significantly positively correlated with its 'education' theme, indicating that in areas where people feel more of a part of their community, there are also better education attainment outcomes.

Evaluating policy initiatives

There are difficulties in the way of reaching reliable conclusions about the effectiveness of policy initiatives given the limited evidence to draw upon. Nor is it easy to compare initiatives when they target different groups of pupils, or when the same schools and children are affected by more than one initiative at the same time. For these reasons, along with the demands arising from ethical guidelines, it is also challenging to incorporate rigorous controls into the evaluation process.

To allow for conclusions based on robust evidence, it is desirable that policy initiatives are subject to a thorough and long-term evaluation, which considers both their intended and unintended outcomes. While the fast pace of the policy cycle frequently demands the rapid production of measurable results, a full assessment of impact will generally require that an initiative extends over more than a brief time frame. Furthermore, while a short intervention may be sufficient to raise the attainment of those who are only just below the level expected of them, much more sustained work may be needed in order for those who are a long way behind to show improvement.

The National Evaluation of Sure Start is an example of a systematic and long-term evaluation. While any such exercise requires extensive investment, a value-for-money assessment will consider not only the costs but also the benefits of an evaluation that delivers secure evidence and guidance for policy.

Conclusions

In the course of this review we have sought to illustrate the cumulative nature of risk and disadvantage alongside the complexities of individual development, in turn suggesting that simple associations between any one factor and individual attainment will rarely do justice to the multifaceted relationships between them. Nevertheless, there are some clear conclusions to draw from the evidence reviewed here.

Compared with others, boys, minority ethnic groups, children from low socio-economic backgrounds and children with poor home learning environments do substantially worse on average. Furthermore, students make less progress in schools with a high proportion of boys, FSM students, and students with English as a second language.

The most significant indicator of achievement is prior attainment, but there are sizeable differences between different groups of children: for example, White British children are most likely to remain low achievers if they start from that position, and they are least likely to remain high achievers. However, academic trajectories are by no means fixed, and while there are some fixed factors which may act to disadvantage some children, their effects can be mitigated with appropriate support and there is potential to improve the achievement of many low attainers. It is often a combination of numerous factors that account for low attainment, including factors that are sensitive to region and locality. This implies a role for initiatives at a local level, including those that allow for a measure of flexibility according to local circumstances, under the guidance of leaders who know their contexts well.

Successful approaches to raising low attainment also include: supporting the development of a good home learning environment in the early years; personalised approaches to teaching and learning; raising aspirations through specific programmes; the provision of incentives to stay in education beyond the age of 16; and targeted support in school. In addition to providing help for individual pupils, support might include an audit of groups (differentiated by ethnicity, gender, social class, and so on) which are falling behind, and developing an appropriate response. Measures might include school coordinators to champion achievement for groups at risk of low attainment, and the inclusion of objectives for raising the attainment of low achieving groups within performance management for senior managers.

Early influences, and parents in particular, have a significant and long-lasting effect on attainment, and parental aspirations for their children may be particularly important. Providing support for parents is therefore likely to be beneficial for children, not only in the short term, but also at later periods in their lives. Parental support is also instrumental in helping young people develop an intrinsic motivation

for learning: a motivation that is vital in enabling young people to develop a sense of their responsibility for their own learning and to remain engaged with it. However, schools and individuals who work with young people – such as learning mentors – can also play a role in the process of raising aspirations, which might also include providing opportunities for young people to extend their horizons, enabling them to ‘see’ themselves in a new and untried environment for example.

Targeted initiatives may be more successful than universal approaches to addressing low levels of attainment. However, targeted approaches also generate significant practical difficulties; for example, initiatives targeted at deprived areas may be adopted most enthusiastically by families within those areas who are not deprived. Furthermore, support for low attainment should not be stigmatised: where stigmatisation is avoided the effect is often higher levels of engagement, and an improvement in the effectiveness of provision.

There are some strategies for which evidence of positive impact remains weak. For example, investment of additional resources, as such, appears not to have a sizeable impact: the impact largely depends on how those resources are used. The evidence for setting and streaming having a positive effect is also far from robust, and there is some evidence that the effect on low attainers is often detrimental. On structural changes to provision, including Academies and Specialist Schools, and on support for local delivery, including Excellence in Cities and City Challenge, the evidence is generally positive but more mixed as compared with evidence on the other approaches we discuss. It should also be noted that some initiatives may have unintended consequences; for example, the emergence of a market in education may lead to an overall average rise in education standards, while also contributing to a widening gap between the highest and lowest levels of attainment.

The initiatives highlighted in this report are largely focused on increasing pupil attainment; however, there are other initiatives and agendas which, whilst not having this as a primary or even a stated aim, nevertheless exert a considerable influence on the levers on attainment. Examples include initiatives to improve child health, reduce child poverty, and improve parenting skills. The significance of all such approaches, whether or not they are explicitly designed to raise attainment, is clear in the context of the overarching aim of the DCSF’s *Children’s Plan*: that is, to make England the best place in the world for children to grow up. For the overall concern of children’s services is to help make not only their attainment in school, but all aspects of their lives, the best that they can be.

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Centre for Research on the Wider Benefits of Learning Research Report No.31

Influences and leverages on low levels of attainment: a review of literature and policy initiatives

**Kathryn Duckworth, Rodie Akerman,
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→ The ideas of excellence and equity for all children and young people underpin Government policy. This demands that no child should receive less than the highest quality education, or achieve at levels that fail to fulfil their full potential. Nevertheless, there remain a significant number of low attaining pupils. We need to understand both the influences on low attainers in particular, and how policy can intervene to raise attainment levels: hence this review of literature on influences and leverages.

The review explores the influences on progress and attainment throughout childhood and early adulthood. We first consider who the low attainers are, and provide a critical analysis of the different individual, family and school level factors associated with low educational attainment, particularly among 14-19 year olds. We identify the questions that remain in dispute and go on to review some of the policy initiatives attempting to improve standards for this group of young people. We conclude by summarising the evidence on the extent of the initiatives' impact, reviewing its limitations and examining the implications for policy design.

The factors contributing to low educational achievement are many and complex, and it is not

always possible to determine whether one factor is causing or being caused by another. However, there is convincing evidence that individual characteristics and family background have a significant effect on achievement, from the earliest years. Compared with others, boys, minority ethnic groups, children from low socio-economic backgrounds and children with poor home learning environments do substantially worse on average. While the most significant indicator of achievement is prior attainment, academic trajectories are by no means fixed, and there are sizeable differences between different groups. A good school or pre-school can have a lasting beneficial influence, and primary school has more impact on eventual outcomes than secondary school.

This suggests that while there are some fixed factors that may act to disadvantage some children, there is also potential to improve the achievement of many low attainers. Successful approaches include: programmes to raise aspirations; incentives to stay in education beyond 16; supporting the development of a good home learning environment; and targeted support in school. Assigning more resources to schools does not seem on its own to have a substantial effect on attainment, and the

evidence for setting and streaming having a positive effect is far from robust.

Efforts to address low attainment can be difficult to evaluate, but we can identify some general principles surrounding policy development. For example, targeted initiatives may be more successful than universal approaches, and the complexity of factors that account for low attainment suggests the need for a measure of flexibility according to local circumstances. Finally, providing support for parents in the early years may be particularly beneficial for children in both the short term and at later periods in their lives.

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