EXCELLENCE IN CITIES

PUPIL OUTCOMES: THE IMPACT OF EIC

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CONTENTS

page

1. INTRODUCTION

This report is based on the detailed analysis of longitudinal and cross-sectional survey data from pupils, teachers and senior managers in schools in areas in Phase 1, 2 and 3 of Excellence in Cities. The surveys are part of a range of different evaluation techniques that are being used to examine the impact of Excellence in Cities on young people's experience of, attitudes towards and outcomes from education. The baseline data was collected in the autumn of 2000 and the spring of 2001, some 12 to 18 months after the launch of the policy. A second tranche of data collection took place in the spring of 2002 and followed the first cohorts of young people (from Years 7 to 11) into their next year group. The analysis that is presented here focuses on the impact on young people, rather than on their schools or teachers, and examines the progress that has been made from the 2001 baseline, in terms of changes in young people's attitudes, behaviour and performance.

Excellence in Cities (EiC), launched in September 1999, is one of the Government's key policy initiatives for redressing educational disadvantage and under-performance in schools located within the most deprived urban areas of England. It has adopted a multi-strand approach to raising standards and performance and emphasises the use of locally-based partnership approaches and targeted provision.[1] While some of the policy strands (such as Excellence Action Zones, City Learning Centres, Learning Support Units, Beacon Schools and Specialist Schools) operate at either area or whole school level, others are specifically targeted at the individual student. The Gifted and Talented Strand, for instance, focuses on enhancing the educational experience and raising the attainment of the most able young people in each of the schools. The Learning Mentor Strand seeks to provide support for those young people who may be (or may become) disaffected or disengaged as a result a variety of different barriers to learning. The extent to which EiC can be effective in meeting its overall aims[2] will be a combination of the individual impact of each of the policy strands and the extent to which they articulate together to raise performance across the academic spectrum.

A detailed analysis of the baseline data collected in 2001 (Morris and Rutt, 2002)[3], suggested (not surprisingly) that, at that early stage of implementation, there was little

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[1] An outline of the various strands, and a discussion of the context in which they are delivered, can be found in the *Overview of Interim Findings* published in June 2002.

[2] These can be found in Annex 1 of this paper.

[3] MORRIS, M. and RUTT, S. (2002). *Analysing Pupil Outcomes.* http://www.nfer.ac.uk/research/documents/EIC/09-2002.doc. Note that the structure of the surveys allowed a comparative analysis between EiC and non-EiC schools for young people in Year 9, but only an internal Phase comparison (between Phases 1 and 2) for young people in Year 11. Full details of the structure of the survey cohorts can be found in Annex 2.

evidence of any major impact of the EiC policy on overall attainment. By comparison with non-EiC schools, there were some indications of a possible impact in key stage 3, against particular strategies (such as setting across subject areas) and in particular types of school (such as boys' schools). The 2001 data also suggested that EiC may have had a further marginal impact at key stage 4, although the very slight differences noted between the average GCSE scores for young people in Phase 1 schools compared to those in Phase 2 may simply have been a reflection of entry policy.

However, there were some clearer indications of the impact of the individual strands of the policy. Firstly, higher levels of attainment, at all key stages, were uniformly associated with young people who were designated as **gifted and talented**, over and above the level that would be expected given their prior attainment.[4] Secondly, there was an association between a young person designated as gifted and talented and positive attitudes to learning and school. These were the attitudes that were found to be related to higher levels of attainment and lower levels of absence. Amongst such gifted and talented pupils in Years 9 and 11, self-reported behaviour and attitudes towards education were more positive than amongst other pupils with the same prior attainment. Furthermore, they were also less likely to feel that they needed extra help and, in the case of Year 11 pupils, to feel that their school was insufficiently focused on examinations, or to express concern about their future than their academic peers.[5] Thirdly, more positive attitudes to school were found amongst young people who had seen a **mentor** in Year 9. While such young people were most likely to be those who were underachieving and whose levels of authorised absence were generally higher than those of their peers with the same attainment at key stage 2, there was an indication that they were more positive about their school and the nature of the activities and support it provided and were also more likely to believe that their parents were supportive.

The question for Excellence in Cities is whether these positive changes in attitude can be ultimately translated into positive changes in behaviour and/or performance. The

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[4] These differences were relatively small (at key stage 4, for example, they were 0.08 of an average grade at GCSE, for instance). Differences in performance were also seen in non-EiC schools between pupils designated as gifted and talented and non-gifted and talented pupils at key stage 3. However, this differentiation suggests that the strategies in place to raise achievement amongst gifted and talented pupils (whether as part of the EiC policy or not) were having an effect on performance.

[5] Note that the criteria for designating young people as gifted and talented is highly dependent upon the cohort within any one school. Pupils with the same average levels of prior attainment may be designated as gifted and talented in one school, but not in another, for example. Nor is it possible to ascertain whether the attitudes they expressed entirely pre-dated EiC (and may even have contributed to the designation of the young person as gifted and talented) or whether they had become more evident as a result of the activities in which they had taken part as a result of EiC.

analysis of the 2002 data, which is presented in this paper, suggests that, for some pupils, this may indeed have been the case. There are indications of the **positive impact of the Learning Mentor Strand** on the attainment of young people in lower performing schools and some, indeed, in higher performing schools. Furthermore, there are clear intimations that the **Gifted and Talented Strand has contributed to raising performance** amongst young people across all of the cohorts so designated, and has had particular success amongst those who, in terms of prior attainment, were at the lower end of such groups.

This paper, therefore, examines the evidence for this impact and explores the extent to which it is possible to identify any overall or specific EiC effect one year on from the baseline. The analysis that is presented here examines data from two sets of cross-sectional surveys of pupils (the Year 9 and Year 11 cohorts in 2001 and 2002) and two sets of longitudinal data from the same survey sweeps (the Year 10 cohort in 2001 progressing into Year 11 in 2002 and the Year 8 cohort in 2001 progressing into the Year 9 cohort in 2002). It includes information obtained in questionnaires from young people's schools and teachers, including data on pupil data forms that indicate whether young people were in the gifted and talented cohort, for example. It also draws on data from PLASC (the Pupil Level Annual School Census) and the NPD (National Pupil Database, which includes pupil attainment data). The young people included in the cross-sectional dataset are those for whom full data (the school survey, the teachers' survey, the pupils' survey, pupil data forms and PLASC and NPD) was available. Those included in the longitudinal analysis are those for whom a minimum of a pupil questionnaire, pupil data form and PLASC and NPD data was available.

The analysis, at this stage, does not include a consideration of the formal comparison group, as, in 2002, the comparison cohort were in Year 10, which meant that there was no end of key stage performance data to examine in relation to pupil outcomes. Survey and other data was obtained from this group in 2002, but will be used to contribute to the Year 9 to Year 11 longitudinal analysis for 2003.

2. ANALYSING THE DATA

As in 2001, a series of different statistical techniques were employed to assess the impact of the policy. Within each cohort, young people's responses to the surveys were combined, mainly using factor analysis, to derive a series of measures relating to their attitudes and experiences. Since the questions were replicated in each survey, these measures were calculated in the same way for each of the various cohorts of students. However, in the case of young people in Years 10 and 11, an additional measure, specifically relating to their attitudes to the future, was also derived. A similar strategy was deployed for both the schools' survey and the teachers' survey, in order to develop a series of composite measures of provision and of teacher attitudes and perceptions of EiC.

Data on young people's attainment[6] was matched to data obtained from their individual questionnaires and to other background data (such as whether or not they had seen a Learning Mentor, attended an LSU, or were designated as gifted and talented). This data was incorporated into a series of multilevel models and logistic regression models (some of which were also multilevel) in order to explore the specific impact of EiC and of its various strands.[7]

To begin with, **cross-sectional models** were constructed to look at a range of 'hard' outcome measures (attainment, attendance and fixed term exclusions). The attainment models, for example, were based initially on data for **10,804 Year 11** pupils for whom all data was available (5480 from 2001 and 5324 from 2002) and for **14,791 Year** 9 pupils (6976 from 2001, including 2417 in the comparison group, and 7815 from 2002). Individual attainment models varied slightly in the total number of young people that they included, depending on the extent of missing attainment items on the NPD for each pupil. For instance, while it was possible to include 10630 of the 10804 pupils in the case of the model looking at total GCSE score (some attainment and/or other key data was missing for 147 pupils in the 2002 cohort), only 10484 were included in the model looking at young people's best (or capped) eight GCSE scores: data for some 320 pupils was missing.

The attendance and exclusion models were based, in each case, on sub-sets of the data. Definitive information, at individual pupil level, was not always available from

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[6] This included prior attainment (at key stage 2 or 3, as appropriate) and attainment at the end of the key stage (3 or 4, respectively).

[7] A description of the technique can be found in Annex 3.

schools on young people's absence or on periods of fixed term exclusion. For instance, it was not always possible to tell from the pupil data forms whether the lack of data on exclusions meant that young people had not been excluded or whether they had been excluded but the fact had not been recorded on the forms. Where the interpretation of such missing data was unclear, young people were removed from the model. This meant, for example, that the Year 9 exclusions model was based on data for a sub-set of 8,490 of the 14,791 young people, of whom four per cent (307) had been excluded for a fixed period at some point in the previous academic year.

Secondly, **longitudinal models**, based on 4,424 pupils for whom data was available in both Year 10 and Year 11, and for 4,361 pupils for whom data was available from Year 8 and 9, were constructed. These models included additional variables, derived from the questionnaire items, which reflected any observed change in attitudes for each pupil between 2001 and 2002.

Following the construction of the cross-sectional and longitudinal models, two further sets of multilevel models were created to look at the two attitude variables that seemed to be most significantly associated with pupil performance, whether in terms of the cross-sectional or longitudinal analysis. Finally, a number of logistic multilevel models were constructed to examine the relative impact of school and EiC-related strategies on the development of, or changes in, these attitudes.

The discussion that follows in Section 3 focuses on three key areas that are largely outwith the scope of the EiC policy: the impact on key stage outcomes of young people's **prior attainment**, their individual **background characteristics** (including sex, ethnicity and special educational needs) and their **family circumstances** (including socio-economic background and parental education). This precedes a consideration, in Section 4, of those areas within which EiC might be thought to exert some influence, either through the provision of activities or through the provision of support strategies that might individually or collectively influence attitudes and/or young people's behaviour, thence outcomes such as attendance, attainment or exclusion. The role that could be played by schools in augmenting those strategies is explored further in Section 5, prior to a brief summary of the perceived impact of the policy, to date, in Section 6.

It should be noted that, in reporting the findings from the various analyses, only those which have been shown to have a significant statistical association (whether positive or negative) with the attainment, attendance or exclusion outcomes being explored

have been included in this paper. For some elements of the strategy (access to a Learning Support Unit, for example) there is insufficient data to assess the impact on individuals (too few young people in the survey cohorts were referred to a Learning Support Unit, for instance, for the analysis to show any significant associations with the pupil outcomes being explored). This does not mean that the strands were ineffective, only that they did not emerge as significant, once all of the other pupil level data was taken into account.

3. BACKGROUND FACTORS ASSOCIATED WITH DIFFERENT LEVELS OF PUPIL PERFORMANCE

Key findings

From the cross-sectional data analysis:

♦ The most significant association with pupil performance outcomes, whether at key stage 3 or at GCSE, is prior attainment.

♦ There was no significant difference in the progress made by boys or girls between key stage 2 and key stage 3 in EiC or non-EiC schools in the surveys. However, Indian pupils made more progress (and Caribbean pupils less progress) than white UK pupils with the same levels of prior attainment.[8]

♦ Girls generally made more progress than boys from key stage 3 to key stage 4 in EiC schools. However, on average, boys from African, Indian and Pakistani backgrounds had higher levels of attainment at GCSE than girls from white UK backgrounds, taking prior attainment into account.

♦ Girls in the Year 11 EiC cohort in 2002 made more progress from key stage 3 to key stage 4 than girls in the Year 11 EiC cohort in 2001.

♦ Asian and black pupils in EiC schools made more progress from key stage 3 to 4 than pupils from white UK backgrounds with the same levels of prior attainment, both between cohorts (2001 and 2002 cross-sectional data) and within the 2002 cohort (longitudinal data).

♦ Once prior attainment was taken into account, Asian students in EiC schools were more than twice as likely as other students to have attained five or more A* to C grades at GCSE and to have achieved three or more GCSEs graded at A*.

♦ Asian girls in both Year 11 cohorts performed marginally less well in their best eight GCSEs than other girls with the same prior attainment in EiC schools.

From the longitudinal analysis:

♦ African girls in the 2002 Year 11 cohort performed less well in their best eight GCSEs than African boys, although their levels of attainment (controlling for prior attainment) were still higher than those of other girls or of boys from white UK backgrounds.

♦ There appears to be a longer tail of under-performance (by comparison with what might be predicted from prior attainment) amongst young people from white UK backgrounds than amongst young people from minority ethnic groups.

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8   Ethnicity data, obtained from PLASC, was available for both the cross-sectional and longitudinal analyses of the Year 9 cohort, but only for the longitudinal analysis of the Year 11 cohorts. PLASC data was not available for the Year 11 2001 cohort, so the cross-sectional analysis is based on self-reported ethnicity data.

An initial analysis of the data in 2001 had indicated (not surprisingly) that the factor that had the most significant association with key stage performance was **prior attainment**.[9] This remained the case across each of the cohorts in both the cross-sectional and longitudinal analyses. Once all other background factors (at LEA, school and pupil level) were taken into consideration for both 2001 and 2002, for instance, higher levels of average attainment at key stage 2 were significantly associated with higher levels of attainment at key stage 3 for both Year 9 cohorts and in both EiC and non-EiC schools.[10] In other words, girls or boys who achieved a mean of level 3 at key stage 2 would achieve, on average, 0.84 of a level higher at key stage 3 than those who had previously achieved level 2 at key stage 2.

It should be noted, however, that progress was also associated with school and area level variables. Young people in low attaining schools (that is, schools in which key stage 3 performance had been low when young people entered the school at the start of Year 7) achieved, on average, 0.12 of a level below pupils with similar prior attainment in other schools, while those attending high performing schools achieved, on average, 0.12 of a level higher than their academic peers in other schools. Young people in EiC and non-EiC schools in the south west performed at 0.28 of a level lower and young people in the north west at 0.28 of a level higher, than young people with similar prior attainment and other characteristics in other parts of the country, whether in EiC or non-EiC schools.[11]

The association between prior attainment and end of key stage outcome was even more evident at key stage 4. Across both Year 11 cohorts (all of whom were in EiC schools), boys who had achieved level 5 at key stage 3, for example, scored a mean of 11.01 more GCSE points (over an average of 9.2 entries) at key stage 4 than those

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[9]   MORRIS, M. and RUTT, S. (2002). *Analysing Pupil Outcomes.* http://www.nfer.ac.uk/research/documents/EIC/09-2002.doc. Accessed 02-02-04.

[10] Data on raw scores at key stage 2 for English, maths and science was available from the NPD. However such data was not available for key stage 3 outcomes. This is because the key stage tests at key stage 3 are tiered and so raw scores are not directly comparable. Although analysis using raw scores at key stage 2 was conducted to identify associations at subject level, the data that presented here is based on average levels. This is in order to facilitate a clearer understanding of relative impact.

[11] It should be noted that the young people from the south west made up only two per cent of the whole cohort. Nonetheless, the difference in performance was even more evident in the longitudinal models (which did not include any young people from the comparison schools) in which young people from the south west attained, on average, 0.48 of a level lower than young people from other areas. In contrast, young people from EiC schools in the north west (who made up 11% of the cohort) achieved 0.28 of a level higher at key stage 3 than comparable young people from other areas.

who had achieved an average of level 4 in their Year 9 assessments.[12] This is equivalent, approximately, to an additional two GCSEs at grade B or to achieving two GCSEs at grade B and seven at grade C instead of nine GCSEs at grade D.[13] This degree of difference was also evident when the progress of the 4,424 young people from the 2001 Year 10 cohort was observed in 2002, with an average difference of some 11.62 total GCSE points being noted between the progress of young people from each of the key stage 3 levels.

Between the end of key stage 2 and the end of key stage 3 there was little apparent difference in the progress made by boys and girls. By key stage 4, a clear differential had emerged between girls and boys, however, with girls scoring, on average, an additional 2.05 GCSE points in total (equivalent to raising two grade Cs to grade B, for example) compared to boys with similar key stage 3 levels.[14] Moreover, their mean point score per GCSE was, on average, higher by 0.18 than that for boys and they were 1.3 times as likely to achieve five or more A*to C grades than boys with the same prior attainment and other characteristics.[15] The difference was even more marked amongst girls who had been higher attainers at key stage 3.[16] Amongst these girls, GCSE total scores were boosted by a further 0.74 points (three-quarters of one grade point) and their average GCSE point scores were some 0.07 points higher per GCSE. This data suggests that the gap between girls and boys with higher levels of prior attainment was wider than the gap noted amongst the lower attainers. There was also some indication that the gap may be widening further over time, except in the case of Asian and African pupils (see page 10). Overall, amongst the survey cohorts, the mean total GCSE score for the 2001 cohort was 42 points, that for the 2002 cohort was 40.5. Yet, amongst girls from the 2002 cohort, total scores were 0.95 of a grade

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[12] The mean of 11.01 GCSE points is based on a calculation of the effect size. For dichotomous variables, the effect size is based on the mean variation observed in the change of one variable over another (for example, the mean difference in GCSE score that is observed between being a boy and being a girl). For continuous variables, such as prior attainment, the effect size presented here is based on a calculation of the square root of 2 multiplied by the estimate for the standard deviation.

[13] For each level change at key stage 3, the change in GCSE points is equivalent to approximately 1.19 points per GCSE.

[14] It should be noted that, at present, models for key stage 3 have only been created for the average level attained across all assessments – English, maths and science. Once the 2003 data becomes available, additional models for the three subject areas will also be created. However, it is worth being aware that, although key stage 2 results are available as raw scores, those for key stage 3 are only available as levels and do not allow sophisticated interrogation.

[15] The analysis of the national dataset suggests that girls across all EiC schools in 2001 and 2002 were 1.6 times more likely achieve five or more A*to C grades than boys with the same prior attainment and other characteristics. The national analysis, however, does not include any data on ethnicity or home background for these cohorts.

[16] The mean key stage 3 attainment for the two Year 11 cohorts was 4.86. The higher attaining pupils were those who achieved at least half a level above this when they were in Year 9.

higher by comparison with girls from the 2001 cohort, all other things being equal. Moreover, average score points were 0.07 points higher per GCSE amongst girls in the 2002 cohort.

The figure below provides one illustration of what these differences might look like in terms of GCSE attainment for young people with the same background characteristics (other than sex), but with different prior attainment. It is important to note that the illustration is not based on raw data alone, but on the outcomes that might be expected were the young people without any contra-indications (such as special educational needs or free school meals), and expressed average attitudes to school, their education and the extent of their parental support and had no behavioural difficulties, nor any indication that they had been referred to a Learning Mentor, for example.

Figure 1.   Potential key stage 4 outcomes for 2001 and 2002 EiC survey cohorts based on key stage 3 prior attainment

Hypothetical Pupil	**Hypothetical achievement**
Boy: level 4 key stage 3	8 grade Cs and 1 grade D (or 44 points)
Girl: level 4 key stage 3	1 grade B and 8 grade Cs (or 46 points)
Boy: level 5 key stage 3	9 grade Bs (or 54 points)
Girl: level 5 key stage 3	2 grade As and 7 grade Bs (or 56 points)
Higher attaining girl (at KS3)[17] from 2001 cohort	3 grade As and 6 grade Bs (or 57 points)
Girl from 2002 cohort	3 grade As and 6 grade Bs (or 57 points)
Higher attaining girl (at KS3)[18] from 2002 EiC cohort.	1 A* , 2 grade As and 6 grade Bs (or 58 points)

Some variations to this general picture were observed. Asian students (some 13% of the cohorts) and black students (who made up 5% of the cohorts)[19] scored, on average, more highly at key stage 4 than all other students with the same key stage 3 average level (by 3.41 and 1.67 GCSE points, respectively). Young people with some special

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[17]   As above.

[18]   As above.

[19]   It should be noted that designation as Asian or black for the cross-sectional analysis is, necessarily, based on self-reported data, since PLASC information on minority ethnic classification was not available for the 2001 Year 11 cohort. The longitudinal analyses (Year 10 to Year 11 and Year 8 to Year 9) uses the 2002 PLASC classifications.

educational needs (some 15% of the cohort)[20] achieved fewer total GCSE points than other young people with the same level of prior attainment (an average of 2.3 GCSE points).[21] Young people who had been excluded from school for any period during the previous year (that is, when they were in Year 10) were also less likely to have achieved as well as their peers, with fixed-term exclusions being negatively associated with attainment (some 3.34 GCSE points lower than would have been predicted from the key stage 3 scores for this cohort).[22]

The story was very similar when young people's best eight GCSEs (instead of their total GCSE scores) were considered and when the proportion who achieved five or more GCSEs at grades A* to C was examined. There were some observable differences between and within ethnic groups, however, even when factors such as pupil characteristics, home background, pupil attitudes and prior attainment were taken into account. It appeared that the difference between Asian girls and Asian boys was less than that between white UK boys and white UK girls. When one examines the outcomes across young people's best eight GCSEs, the difference in point scores between Asian girls and boys was less than a third of that between white UK girls and white UK boys. Black pupils achieved total GCSE scores, best eight GCSE scores and mean GCSE scores that were, on average, higher than those for other pupils (except Asian students) with the same level of prior attainment and other characteristics. However, black pupils were not associated with a greater probability of achieving five A* to C grades. By contrast, Asian pupils were more than twice as likely as other pupils (at the same key stage 3 level) to have attained such grades and to have achieved three or more GCSEs graded at A*.[23]

Some further insights into ethnic minority differences emerged from the longitudinal models, which were able to incorporate more detailed PLASC data on ethnicity. These revealed that, at key stage 4 in 2002, students from white UK backgrounds performed, on average, less well than young people from African, Indian, Pakistani

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[20] Only a small proportion of these young people had a statement of special educational needs.

[21] At key stage 3, the difference was 0.37 of a level below the attainment of similar pupils with the same prior attainment at key stage 2.

[22] Fixed term exclusions during Year 8 were associated with an average reduction of 0.13 of a level at key stage 3, compared with other pupils with similar prior attainment when they were in key stage 2.

[23] Indian pupils scored an average of 0.13 of a level higher, at key stage 3, than pupils from white UK backgrounds.

and Caribbean backgrounds[24] in terms of their best eight GCSEs and (also by comparison with White European students) their total score at GCSE. Indeed, although girls in general performed better than boys, boys from African,[25] Indian and Pakistani backgrounds had higher levels of attainment (in terms of total GCSE score and best eight GCSE score) than girls with the same prior attainment from white UK backgrounds. The difference noted in the cross-sectional models, in which it appeared that Asian pupils were more likely to obtain five or more A* to C grades than white UK pupils, was not apparent here, when individual ethnic groups were considered. The longitudinal analysis suggests, therefore, that while there is little difference between the different ethnic groups in terms of their highest levels of achievement, there may be a longer 'tail' of low performance amongst young males from white UK backgrounds.

The discussion, so far, has focused on the relative impact of young people's prior attainment and individual background characteristics. A range of other characteristics that are outwith the scope of EiC were also significantly associated with pupil performance. Young people who lived with their mother and their father at home achieved more at key stages 3 and 4 than those who lived with neither,[26] while parental levels of education (albeit as perceived and reported by their children) were significant indicators of attainment, at both key stage 3 (in terms of key stage 3 average levels) and key stage 4 (total GCSE scores and average scores per GCSE). However, while higher levels of attainment amongst young people (in terms of achieving five or more GCSES at A* to C and in terms of best eight GCSEs) were associated with mothers educated to at least degree level, there was no such association with the level of a father's education at key stage 4. Young people in receipt of free school meals (21% of the cohort) achieved an average of 1.51 points

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[24] Although young Caribbean pupils appeared to make more progress by the end of key stage 4 than white UK pupils with the same prior attainment, this did not seem to be the case between the end of key stage 2 and the end of key stage 3 The 2001 and the 2002 data for the Year 9 cohorts suggests that, across both cohorts, not only did Caribbean pupils do less well than white UK pupils with the same prior attainment (by 0.1 of a level), but that there was a significant 'dip' in performance, with higher attaining Caribbean pupils at key stage 2 achieving test results that were a further 0.02 of a level below that which might be expected. The comparative progress made by Caribbean pupils at key stage 4 may, in fact, reflect a level of performance nearer to that which might have been anticipated given their attainment levels at key stage 2.

[25] Indeed, boys from African backgrounds performed better than girls from the same background. When their best eight GCSEs were examined, the achievement of African girls was some 4.86 points lower than for African boys (although it was still 3.53 points higher than for other girls and 5.94 points higher than for boys from white UK backgrounds).

[26] Living with their mother at home (with or without a step-parent) was associated with higher attainment at key stage 4 in the cross-sectional models, but not in the longitudinal models, suggesting a possible cohort effect. A similar story, though related to fathers rather than mothers, emerged in the analysis for key stage 3.

GCSE points lower than other young people with the same level of prior attainment and were less than 75% as likely to achieve five or more GCSES at A* to C than their academic peers.[27]

These factors associated with levels of attainment are largely outwith the immediate compass of school or EiC policy influence. However, it is important that both practitioners and policy makers are aware of the areas in which they might exert positive leverage. Are there aspects of apparent underachievement (such as amongst boys from white UK backgrounds), poor attendance (young people in receipt of free school meals had a significantly higher level of authorised absence – around six half day sessions – than their peers, for example),[28] or exclusion (black girls were five times as likely to be excluded as other girls and one and half times as likely to be excluded as black or white boys)[29] that might be addressed effectively through EiC or its individual strands? Are EiC strategies, such as the deployment of Learning Mentors, helping any particular groups of young people to achieve their potential? What other strategies (linked or otherwise) are schools deploying that seem to be having a positive impact?

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[27] The association at key stage 3 was also evident. Young people in receipt of free school meals achieved, on average 0.11 of a level at key stage 3 than their peers with the same prior attainment but who were less economically disadvantaged. Moreover, young people in schools in which a high proportion of the pupils were in receipt of free school meals attained, on average, 0.01 of a level below that which might be expected given their prior attainment, even though they were not in receipt of free school meals themselves.

[28] It should be noted that the high quantity of missing data (the attendance pattern of 46% of the cohort was not supplied by their schools) meant that attendance could not be included as an input variable in the models. Summary details of the outcomes of the attendance model are included in Annex 4.

[29] The outcomes of the exclusion models are included in Annex 5.

4.   THE IMPACT OF EIC ON PUPIL PERFORMANCE?

An initial analysis of the multilevel models for key stages 3 and 4 suggest that, within two years of their implementation, it is possible to identify the apparently positive impact of two key EiC strategies (the Gifted and Talented Strand and the Learning Mentor Strand) on attainment outcomes for young people. However, it should be noted that this positive impact is not yet universal; some groups of young people appear to have benefited more than others as a result of the implementation of the policy. Moreover, it should be noted that there is a difference in performance amongst young people in schools in different areas of the country. At this stage in the analysis it is not possible to identify whether the different levels of attainment observed amongst young people in schools in London, the south west and the north east are a reflection of the strategies that have been implemented as a result of EiC. Are the higher than predicted levels of GCSE attainment noted in London schools (4.11 total points at GCSE and a higher probability of achieving five or more A* to C grades) a direct result of EiC? Are the lower levels of performance at key stage 3 in the south west (and the higher levels of unauthorised absence amongst the Year 9 cohorts) an indication of any 'failure' of the policy at a local level?

4.1   Impact of the Gifted and Talented Strand: Attainment

The young people included in the models from the 2001 and 2002 Year 11 gifted and talented cohorts comprised some 10 per cent of the survey cohort (nine per cent of the males and 11 per cent of the females). In Year 9, some nine per cent were so designated (11% of the females and seven per cent of the males). By comparison with their peers, Year 11 gifted and talented pupils were less likely to be eligible for free school meals (10% compared to 22%), to be acknowledged as having any special educational needs (5% compared to 16%), never to speak English in their home (<1% compared to 2%) or to have been excluded for any period during Year 10 (2% compared to 4%).[30]   The comparisons were very similar for the Year 9 cohorts, although there were fewer fixed term exclusions in either group (1% compared to 4%).

Some disparities existed in terms of the representation of ethnic backgrounds within the gifted and talented cohort. Although Asian respondents comprised some 13% of all Year 11 survey respondents, only six per cent of the cohort designated as gifted

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[30]   They were also less likely to play truant or to have periods of recorded authorised or unauthorised absence.

and talented was Asian. By contrast, 78% of the gifted and talented cohort was from a white UK background, even though this group made up only 70% of the young people in the model. Representation across the other minority ethnic groups, however, more closely reflected the profile of the Year 11 survey respondents.[31]

Not surprisingly, raw attainment scores for the gifted and talented group in the Year 11 cohorts suggest that their average level of achievement was higher than that for the cohort as a whole. On average, young people so designated achieved a total GCSE score of 58.6 points over a mean of 9.9 entries (approximately equivalent to 9 GCSES at grade B and one at grade C). This compares favourably with an average of 39.4 GCSE points over an average of 9.4 entries (or around 7 GCSEs at grade D, one at grade C and one at grade B) by young people not so designated. However, the success of the gifted and talented strand needs to be assessed not in terms of comparisons made with all pupils, but in comparison with the outcomes for the pupils who were not designated as gifted and talented even though they had similar background characteristics and similar prior attainment: the average key stage 3 attainment of gifted and talented pupils in the Year 11 cohort was level 6, while that for the rest of the cohort was 4.7.[32] To date, and as indicated below, when all other measurable variables are taken into account, **young people who were designated as gifted and talented achieved better outcomes at both key stage 3 and at key stage 4 than their academic peers**.

In summary, for the Year 9 and Year 11 pupils in EiC cohorts in 2001 and 2002, there appears to be a significant positive association between being designated as gifted and talented and assessed achievement in relation to:

♦ average key stage 3 level achieved (0.45 of a level higher than young people with similar prior attainment)

♦ total GCSE score (plus 4.97 points)

♦ best 8 GCSE total score (plus 3.88 points)

♦ average GCSE score (plus 0.46 points per GCSE)

♦ likelihood of achieving 5 or more GCSEs at A* to C (gifted and talented pupils were more than three times as likely to achieve 5 A* to C grades than similar young people not so designated)

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[31] It should be noted, however, that while nearly one fifth of the 67 Chinese Year 11 pupils involved in the modelling process were designated as gifted and talented, only one twentieth of the 1,266 Year 11 Asian pupils were included in this group. These categories for the cross-sectional models, it should be noted, come from self-reported data.

[32] The average level of key stage attainment amongst the Year 9 gifted and talented cohort was 4.5, that for the rest of the cohort was 3.7.

This achievement was not completely uniform, however. The Gifted and Talented Strand appears to have had a particularly significant impact on the performance of young people who were so designated, but who were not previously at the top of the achievement bands at key stage 2 or key stage 3. Being identified as gifted and talented during key stage 3 was associated with achieving an extra 0.46 of a level at key stage 3, but with only 0.28 of a level amongst previous high attainers. At key stage 4, those who had been designated gifted and talented achieved, on average, 4.97 additional total points at GCSE and an average grade at GCSE that was 0.46 points higher than young people with the same prior attainment who were not in the cohort. However, and as at key stage 3, these additional points were less evident amongst young people who were already high attainers at the end of key stage 3 and for whom any added value at key stage 4 was necessarily limited by a 'ceiling effect' at GCSE. It would appear, therefore, that the activities and teaching strategies instigated for young people designated as gifted and talented may have contributed to a reduction in the gap between those who were already high attaining pupils and those who had the potential for high attainment, but who had not previously fulfilled their academic promise.

For some groups of young people, the impact of the Gifted and Talented Strand, though still positive, was marginally less evident (though still statistically significant). On average, and by comparison with white UK pupils with the same prior attainment, black pupils achieved 1.66 additional total points at GCSE. However, for young black pupils who were designated as gifted and talented (some nine per cent of the black cohort and four per cent of the gifted and talented cohort), the activities and teaching and learning strategies in which they participated as part of the gifted and talented strand appeared to have raised their total performance by 3.6 grade points at GCSE, compared with the 4.97 GCSE points achieved by non-black gifted and talented pupils. It is not possible to ascertain from the survey the reasons behind this apparently more limited impact of the strategies involved. One might, perhaps, question whether some variation to the activities or strategies might be more successful in further raising the performance of these pupils to the same level as their gifted and talented peers from other ethnic backgrounds.

There appears to be a cumulative effect of being in a gifted and talented cohort. Amongst young people in Year 9, such a designation in Year 8 alone (i.e. in 2001) was associated with higher attainment in the order of 0.48 of a level, with a similar association (0.46 of a level) with being identified as gifted and talented only in Year 9 (in 2002). The association with such a designation in both years, however, was an outcome at level 3 that was 0.68 of a level higher than would have been expected, given young people's prior attainment.

The story was slightly different for the Year 11 longitudinal cohort. Those young people who were designated as gifted and talented in both 2001 (when they were in Year 10) and in 2002 (Year 11) achieved, on average, an additional 3.75 GCSE points and were over three times (an odds multiplier of 3.4) as likely to achieve five or more A* to C grades. However, those Year 11 pupils who came into the gifted and talented cohort in 2002 made even more significant progress (4.01 additional GCSE points and an increase in the likelihood of achieving five or more A* to C grades – an odds multiplier of 3.8). This is not to suggest that participation in gifted and talented activities or targeted teaching and learning strategies should be postponed until Year 11. For some young people in the models (outwith the gifted and talented cohort in Year 10) it might simply indicate that a significant improvement in academic performance before Year 11 was acknowledged by their then designation as gifted and talented. For others, it might suggest that a late recognition of a young person's abilities, and the consequent activities and teaching and learning strategies to which they then became exposed, had a positive impact on their overall performance. It should be noted that there was no significant improvement in performance (over and above that which might be expected given their prior attainment) amongst young people who were included in the Year 10 2001 gifted and talented cohort but were not subsequently included in the Year 11 2002 cohort.

4.2   Impact of the Learning Mentor Strand: Attainment

Amongst the Year 11 pupils who were included in the modelling process, over one quarter (28%) had reported seeing a Learning Mentor at some point over the previous 12 months, rather more than the 11% of young people in Year 9 who said they had been mentored. The profile of the young people in both year groups appeared to be largely a reflection of the young people for whom the strategy was initially instigated

(that is, those with some barriers to learning).[33] On the whole, mentees were more likely to be suffering from some socio-economic disadvantage or learning difficulty than their peers. There were some differences between the year groups, with an apparently greater emphasis on using Learning Mentors to support young people with special educational needs in Year 9 than in Year 11. Amongst the younger pupils, 35% of the mentees had some special educational needs compared with 16% of those who not seen a Learning Mentor, while amongst the Year 11 cohort, some 16% had some special educational needs compared with 14% of the wider cohort. More of the Year 9 mentee cohort were in receipt of free school meals (29%) than was the case amongst their peers, where 21% were recorded as being in receipt of these. The figures were less diverse in Year 11, with 22% of those who had seen a Learning Mentor on free school meals compared with 20% of the wider cohort. Those who were designated as gifted and talented were as likely to have seen a Learning Mentor as those who were not, suggesting that there was recognition that some of these young people needed additional support to achieve their potential.

On the whole, there was no significant over- or under-representation of Year 11 pupils from minority ethnic backgrounds amongst those who were mentored. Over one-third of the black respondents in Year 11 (and nearly one third of the mixed race respondents) were said to have been mentored. However, when one examines the proportion of black and mixed race pupils amongst the mentees in the survey cohort, the number who had seen a Learning Mentor from these groups was in proportion to their representation over the whole cohort (five per cent and three per cent respectively). The proportions were a little more unbalanced in Year 9, with a five per cent of Caribbean pupils said to have seen a Learning Mentor although they constituted only two per cent of the cohort. This was also the case for African pupils (two per cent compared with one per cent). However, it should be noted that, across both year groups, young people from white UK backgrounds formed a disproportionate group of the mentees. Although such young people comprised 64% of the total Year 9 cohort, they represented 72% of those who had seen a mentor. In Year 11,, they formed 70% of the cohort, but 72% had seen a mentor. Asian pupils, by contrast, were slightly under-represented among Year 11 pupils seeing a Mentor, with 11% of such pupils seeing a Mentor, although they comprised 13% of the cohort. This picture of more limited representation was also true for the Indian, Pakistani Bangladeshi and Chinese pupils in Year 9.

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[33]   Mentees included some 30% of the male cohort and 27% of the female cohort in Year 11 and 14% of the male cohort and nine per cent of the female cohort amongst the Year 9 pupils.

To date, for many of the young people in key stages 3and 4 who were mentored, evidence of 'hard' outcomes is relatively limited, with many such still underachieving (or having poorer attendance records) by comparison with their peers. The overall level of underachievement was not great at 0.8 total GCSE points across an average of 9.2 examination entries and less than one tenth of a GCSE grade per subject, on average.[34] Arguably, however, this level of underperformance might make all the difference between a young person achieving the five GCSEs at level C or above that would enable them to undertake a Level 3 qualification and achieving only four grade Cs and a grade D. Indeed, it was clear that some schools had sought to use Learning Mentors to motivate some young people who, by reference to their key stage 3 achievements, were capable of attaining high levels of qualification at key stage 4. The extent to which they had met with success was variable, although there was clear evidence that the **Learning Mentor Strand had contributed effectively to raising the performance of some pupils and in some schools**.[35]

For young people in low performing schools (that is, schools in which fewer than 30% of the pupils had achieved five or more GCSEs at grade C or above in the year preceding that in which the young people had embarked on their key stage 4 course), seeing a Mentor was associated with a level of performance above that which might be anticipated from their prior attainment. While young people who had seen a mentor achieved, on average, 0.8 points fewer than their academic peers, those who had seen a mentor in a low performing school achieved an additional 0.95 points, on average, and so performed 0.15 GCSE points better than their peers who had not seen a mentor. They obtained higher best eight scores and their average GCSE points per subject were equivalent to their academic peers. They were also one and a half times more likely to have achieved five or more GCSES at A* to C grades than young people with similar prior attainment and other characteristics who had not been mentored.

These findings suggest that, in lower performing schools, Learning Mentors may have managed, successfully, to overcome many (if not all) of the barriers to learning faced by their mentees and, indeed, to raise their performance to levels above those that would have been predicted from their key stage 3 outcomes. Similar successes were noted in high performing schools (schools in which 65% of pupils had achieved five

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[34] At key stage 3, underachievement was in the order of 0.09 of a key stage level and less than that associated with being in a low performing school (0.15 of a level).

[35] It should be noted that this finding is based on any reported contact with a Learning Mentor. While the surveys collected data on number of contacts, they did not collect data on the length of those contacts or on the range of issues covered.

or more GCSEs at grade C or above in the year in which the young people included in the models completed Year 9). In those schools, mentees were three times as likely to have achieved three or more GCSEs at A* than those who had not been mentored (although it should be noted that the proportion of such young people was small).

In summary, for the Year 11 EiC cohorts in 2001 and 2002, there appears to be a significant positive association between:

♦ Being **mentored in a low performing school** and achievement in relation to:
  ➢ total GCSE score
  ➢ best eight GCSE score
  ➢ average GCSE score
  ➢ likelihood of achieving 5 or more GCSEs at A* to C.

♦ Being **mentored in a high performing school** and achievement in relation to:
  ➢ likelihood of achieving 3 or more GCSEs at A*.

As with the gifted and talented cohort, the timescale over which mentoring had taken place was associated with eventual pupil outcomes. While there was no statistical association between being mentored for one year and attainment, there was evidence that some young people who had been mentored for two years by the time they were in the Year 9 cohort achieved, on average 0.3 of a level higher than their academic peers who had not been mentored. This did not appear to be true for girls who had been mentored, or for mentees who had some statement of special educational needs or were in low performing schools. This suggests that the mentoring strategies in place in key stage 3 may be having a bigger impact on boys and on those whose barriers to learning are not necessarily associated with learning difficulties *per se.*

The story amongst the Year 11 cohort was a little different. In contrast with the Year 9 cohorts, those who had been mentored for two years appeared to have lower levels of attainment than those who had been mentored when they were in Year 10 or in Year 11 only.[36] The exception to this, however, was in the case of young people from low performing schools who had been mentored in both Year 10 and Year 11. For these pupils, mentoring appeared to have led to a significant improvement in performance, raising their GCSE outcomes to just above those that might be anticipated given their prior attainment. The evidence to date (both qualitative and quantitative) suggests that young people who need continuing mentor contact are

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[36] These young people still under-performed, though to a lesser extent than those who had been mentored over two years.

likely to be those who have more significant barriers to learning and who may therefore need more intensive support to overcome them.[37] It may be that, in the lower performing schools, mentoring in key stage 4 has been targeted specifically at those young people who might be expected to benefit most from such interventions, rather than at all of the young people who were seen to be underachieving.

One further emerging impact of the Learning Mentor Strand is worth noting here. There was a clear association between those who had a poor record of attendance in Year 8 or Year 10 and those who had seen a Mentor in Year 9 or Year 11 (respectively) suggesting that, in addition to those who are underachieving, Learning Mentors may also be targeting those with a high level of absence (young people who had seen a Mentor in Year 11, for example, had, on average, the equivalent of 1.3 sessions of authorised absence more, in Year 10, than their peers).[38] However, there was evidence that mentors may have played a role in reducing the level of absence amongst some groups of young people. This was particularly the case amongst Year 11 pupils who saw themselves as confident and independent learners. Perhaps surprisingly, these pupils were associated with higher levels of authorised absence than their academic peers (an average of an additional 1.83 half day sessions). However, self-reported 'confident learners' who had seen a mentor had a lower incidence of absence at 1.38 half days than other 'confident learners' (though this is still higher than amongst less apparently confident individuals). This may suggest that feelings of confidence may not always equate to good behaviour (in terms of attendance, for example), but that mentoring may contribute to better attendance amongst such individuals.

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[37] It should be noted that the research team do not have access to the reasons behind young people's individual reasons for referral to a Learning Mentor.

[38] For the younger cohorts, the association with authorised absence was not evident, although mentees were more likely to have a higher incidence of unauthorised absence (0.88 half day sessions more than their academic peers who were not mentored). See Annex 4 for a more complete discussion of the issues around pupil absence and the factors associated with it.

5.   WHAT ELSE CAN SCHOOLS DO?

As outlined in Section 4, there is evidence that EiC may have had an impact on the academic performance of some groups of young people: those who were designated as gifted and talented, those who had been mentored in low performing schools and those who had been mentored in high performing schools. However, an analysis of the survey and performance data also indicates that EiC may be contributing to enhanced performance amongst some young people in ways that are not overtly linked to individual strands, but which are nonetheless clearly associated with the aims and objectives of the policy.

To begin with, the key factors (at pupil level) associated with individual performance at key stages 3 and 4 (and once prior attainment has been taken into account) are **attitudinal**. Young people's positive attitude to the work that they were doing in school – and the extent to which they were actively engaged in completing homework and coursework – was consistently and positively associated with attainment.[39] A **positive attitude to learning** was equated, for example, with 0.16 of a level at key stage 3 and an additional 4.01 total GCSE points, with a higher average score (0.36 of a GCSE point) across each subject for which they were entered at GCSE as well as with a higher likelihood of achieving five or more A* to C grades at GCSE and of achieving three or more GCSEs at A* grades. The young people in Year 11 with whom this positive attitude was most associated were:

♦   those who had been designated as members of a school's gifted and talented cohort

♦   those who had been mentored in low performing schools

♦   those who were the 2002 Year 11 cohorts in Phase 1 and Phase 2 EiC schools compared with those who were in the Year 11 cohorts in these schools in 2001

♦   those who were in EiC Phase 3 schools (in EiC in 2002 only).

In other words, there was a positive association between the attitudinal factor that appeared to be most associated with higher attainment and a) elements of the EiC policy (Learning Mentors and the Gifted and Talented Strand) and b) the length of time in which schools had been engaged in EiC.[40] This last point should be clarified, however, since young people in Year 11 in Phase 3 schools (which had been engaged

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[39]   See Annex 3 for a summary of the attitudinal variables. It should be noted that the surveys do not collect quantifiable evidence on pedagogy or the quality of teaching within the school, although the dominant mode of organisation (for example setting, streaming, banding or mixed ability teaching) and the perceived range of strategies used are included in the analysis.

[40]   It should be noted, however, that overall performance for the 2002 cohort was lower than that for the 2001 cohort.

in EiC for less than a year when the 2002 surveys were conducted) were as positive as those in Phase 1 and Phase 2 schools. However, it is the difference in attitudes between young people in Phase 1 and Phase 2 schools in 2001 and young people in Phase 1 and Phase 2 schools in 2002 that suggests that engagement with EiC may be associated with an improvement in pupils' attitudes between the two cohorts.

Secondly, the longitudinal analysis revealed that a **positive *change* in attitudes to school** between Year 10 and Year 11 was also consistently associated with higher levels of performance. Young people who, in Year 11, demonstrated a more positive view of their school (for instance, in terms of their attitudes to the help support and facilities it provided) than they had shown in Year 10 also appeared to have a greater likelihood of achieving five or more GCSEs at grades A* to C.

However, and more tellingly from the perspective of the EiC policy, was the fact that **a positive change in attitudes to learning and a positive change in attitudes to school were both associated with being mentored in both Year 10 and Year 11**. More than half of the 430 young people who had been mentored over two years demonstrated a positive change in either their attitudes (to school, to teachers and/or to learning) or their behaviour (in terms of improved attendance, punctuality and/or completion of work). This provides some quantifiable support for the view, expressed by many teachers and pupils in EiC schools, that the Learning Mentor Strand had led to some significant changes in pupil behaviour in the classroom.[41] Positive changes in attitude were also particularly associated with overall performance at GCSE and best eight GCSE scores. While the impact of a positive change was small (an average additional 0.65 GCSE point over a mean of 7.7 GCSE entries for the 131 young people whose attitudes to school and to learning had improved), it was nonetheless significant. This suggests that the Learning Mentor Strand, by contributing to an improvement in pupil attitudes and behaviour, may have contributed to a measurable reduction in the level of under-performance previously noted in EiC schools, even amongst young people who under-performed at GCSE.

Given that not every young person will be mentored nor designated as a member of a gifted and talented cohort, what else can schools do to promote a change in attitude that might lead to more positive outcomes at GCSE?

5.1   Attitudes to Learning

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[41]   See Golden *et al.* (2002) (http://www.nfer.ac.uk/research/documents/EIC/16-2002.doc) and Golden *et al.* (2003*)* (http://www.nfer.ac.uk/research/documents/EIC/08-2003.doc) for an evaluation of the Learning Mentor strand.

The most positive attitudes to learning (as reflected in terms of behaviour, attitudes to and completion of work, good attendance and aspirations to continue in education post-16) were evident amongst Asian pupils and girls. Asian girls (who, it may be remembered, performed marginally less well in their best eight GCSEs than other girls in EiC schools in both Year 11 cohorts) were less positive than other girls or than Asian boys, however. Young people who lived with both parents and whose fathers had been educated beyond the age of 16 were also more positive, as were those who had more books in their homes. However, schools can have no impact on such background characteristics. A further analysis of the pupil survey data, using both multilevel modelling and logistic regression analyses to identify the perceived impact of school provision, suggests that schools can do a significant amount to enhance the attitudes and behaviour of young people. As indicated in Figure 5.1 (overleaf), schools may be able to augment the apparently positive impact of EiC strategies, such as Learning Mentors and the activities and teaching and learning strategies deployed with gifted and talented pupils, through the provision of:

- a relevant curriculum (one in which young people feel they are covering a wide range of subjects, which they believe is equipping them with useful skills and knowledge and which gives them helpful information about their choices for the future)

- positive and reinforcing teacher behaviour (in which teachers are seen to praise young people when they work well and to treat the students with respect and are believed to be able to keep order in class)

- provide support mechanisms for homework (with teachers setting homework regularly and seen to ensure its completion, and with schools establishing homework clubs)[42]

- the use of teaching strategies perceived as helpful by the young people, including a mixture of whole class teaching and individual feedback on progress

- the provision of access to ICT outside lesson time and the organisation of extra-curricular activities such as theatre, art gallery and museum visits.

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[42] Recent studies completed at the Institute of Education support the value of such clubs. See, for example, HALLAM, S. (2003) *Homework: The evidence.* London: Institute of Education. See also MACBEATH, J., KIRWAN, T., MYERS, K., McCALL, J., SMITH, I. and McKAY, E. with SHARP, C., BHABRA, S., WEINDLING, D. and POCKLINGTON, K. (2001). *The Impact of Study Support: a Report of a Longitudinal Study into the Impact of Participation in Out-of-school Hours Learning on the Academic Attainment, Attitudes and School Attendance of Secondary School Students* (DfES Research Report 273). London: DfES and **:** SHARP, C., KEYS, W. and BENEFIELD, P. (2001) *Homework: a Review of Recent Research.* Slough: NFER.

Figure 5.1   The probability of enhancing pupils' attitudes to learning
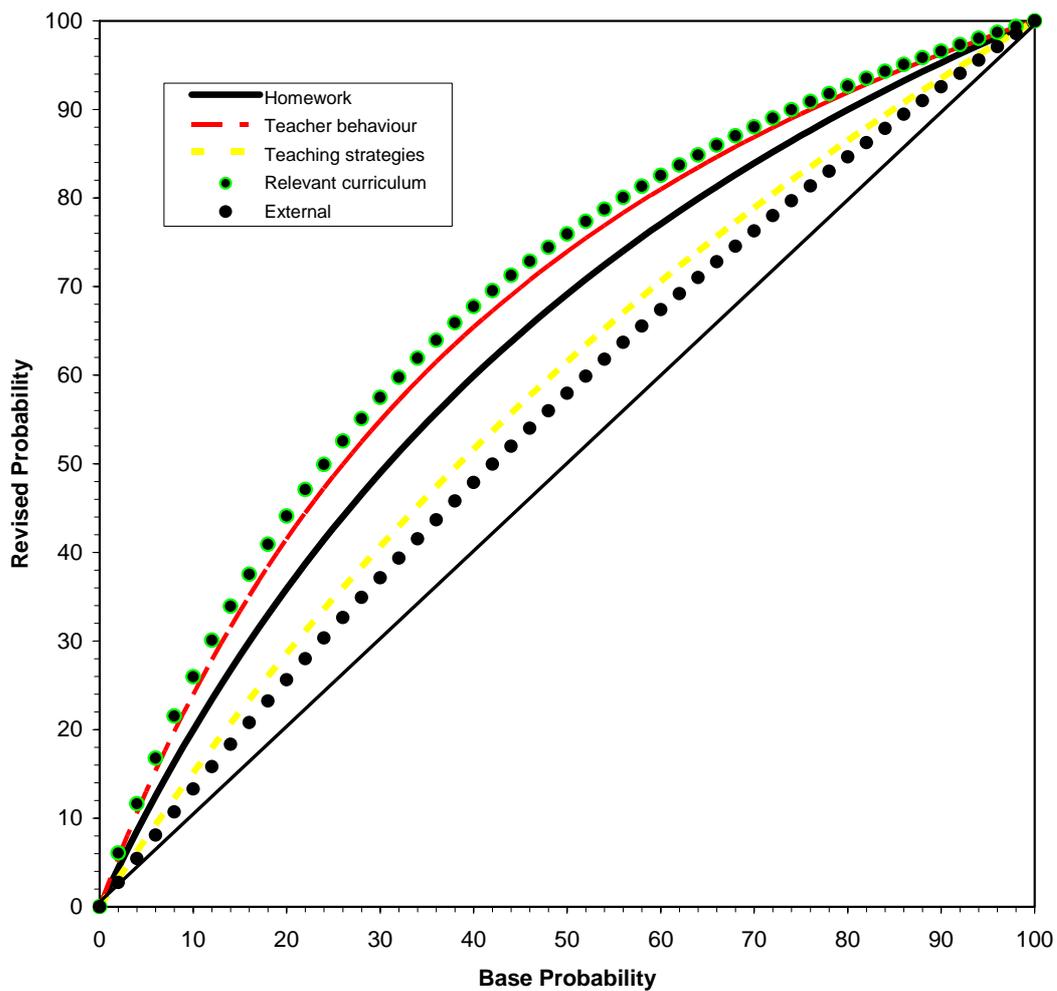
Using the data from the surveys, one can predict the likelihood of any individual having a positive attitude to learning. Amongst the two Year 11 cohorts in the study to date, the probability of a non-Asian low achieving boy (one performing at least half a level below the average key stage 3 attainment – 4.86 – for the cohort) who was in receipt of free school meals and who had been referred to a Mentor having a positive attitude to learning was four per cent. The consistent implementation of all the strategies identified above raises the probability that such a pupil would have a positive attitude to nearer 66%. For a girl with similar background characteristics, the probability would be raised from five per cent to 71%, whilst for a girl without any identified barriers to learning (and hence no need to be referred to a Learning Mentor) the probability would rise from nearly seven per cent to around 80%.

5.2   Attitudes to School

Although a positive attitude to school, *per se,* was not associated with higher levels of performance at key stage 4, a positive *change* in such attitudes to teachers and to the

activities, facilities and support provided by a school, was linked to attainment (see above). The most positive attitudes to school were found amongst Asian pupils and amongst those who lived with both parents. Better attitudes were also identified by pupils who reported that both parents had been educated beyond the age of 16. Positive attitudes to school were also more strongly associated with pupils in Beacon schools, with pupils who were high attainers and in high attaining schools, and with pupils who were designated as gifted and talented or who had seen a Mentor. Mentored girls, however, had less positive attitudes than mentored boys (although they were still more positive than their peers who had not seen a Mentor). This might suggest that the mentoring strategies used, to date, may have had more impact on young males than on young females, but it may also simply reflect the reasons for which young people are referred to Learning Mentors. Do underachieving boys and girls (or those with poor attendance) present the same profile and range of attitudes?

Figure 5.2 below, provides an illustration of the relative impact of school and policy-related interventions on the likely (and positive) change in young people's attitudes to school.

Figure 5.2   Probability of a positive change (10+ points) in attitudes to school
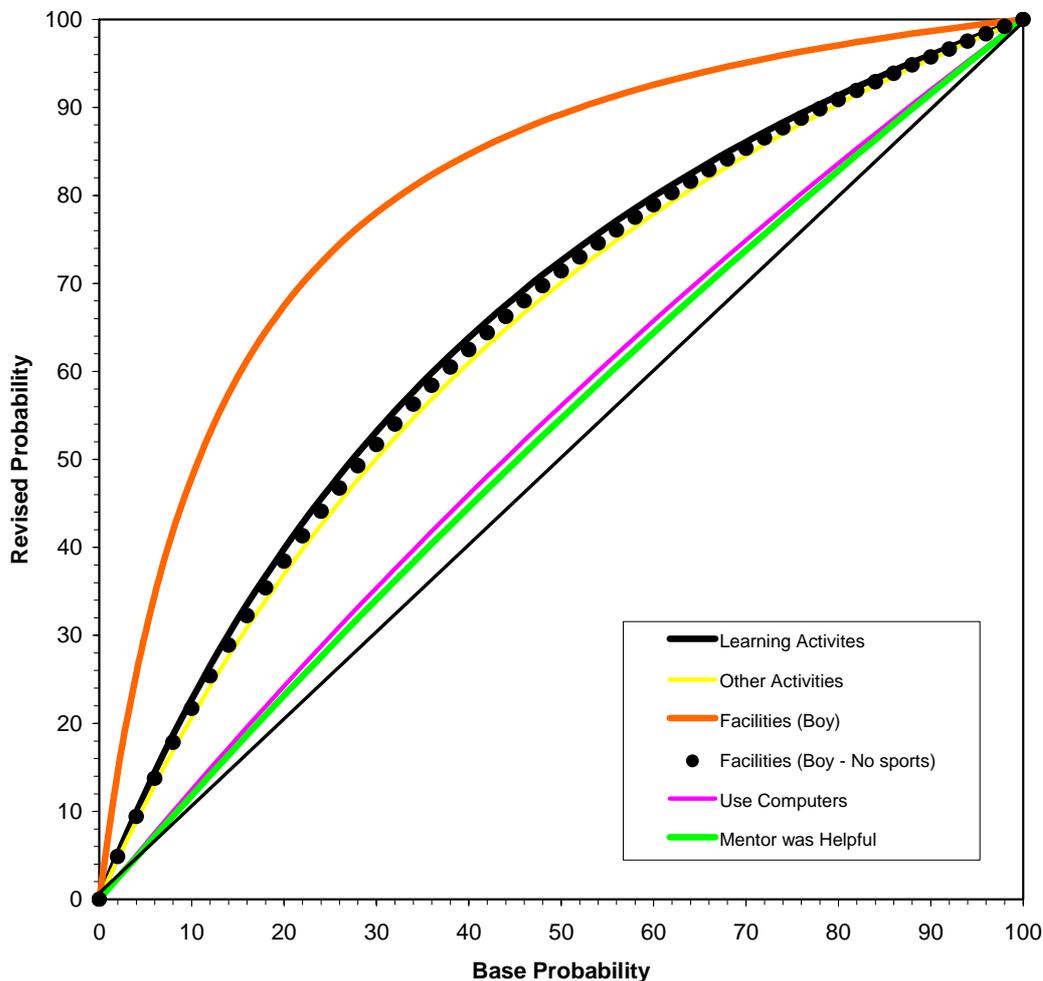
The school factors that appeared to be most strongly associated with the likelihood of developing such positive attitudes (see Figure 5.2) were the provision of appropriate learning and other support activities, particularly access to homework clubs, out-of-school ICT provision and reading and writing activities. For boys, access to good sports facilities appeared to be paramount. Once these facilities are 'switched off' in the analysis, access to good facilities appear to be less important (though, it should be emphasised, only marginally) than wider learning and support activities. For girls, sports facilities were also important, but access to library, science, arts and crafts and language facilities were equally (if not more) central to their positive attitudes to school. It is worth noting the significant impact of Learning Mentors on young people's positive attitudinal change, a point frequently raised by interviewees amongst pupils and teachers in the 2001/02 cohorts.[43]

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[43] See Golden *et al.* (2002) (http://www.nfer.ac.uk/research/documents/EIC/16-2002.doc) and Golden *et al.* (2003*)* (http://www.nfer.ac.uk/research/documents/EIC/08-2003.doc).

6. IN SUMMARY

The cross-sectional and longitudinal analyses for the 2001 and 2002 pupil data suggest that there may be some early measureable impact on pupil outcomes of the Learning Mentor and Gifted and Talented strands of EiC. These quantifiable impacts reflect the qualitative data reported elsewhere, although it should be emphasised that the analysis indicates association, not causality. We cannot know from the survey data, for example, that the positive attitude to learning displayed by a young person in the gifted and talented cohort is a result of their membership of that cohort, or pre-dated it. Where such attitudes have changed over time, and appear subsequent on designation as gifted and talented, for example, one might surmise that there may be a causal link, but one cannot state it categorically on the basis of this statistical analysis. However, given these caveats, it would appear that, once all known background variables have been taken into account, the implementation of these two strands of EiC has had a significant positive impact on:

- the performance of all gifted and talented pupils at key stages 3 and 4
- further raising the attainment of pupils in key stages 3 and 4 in the gifted and talented cohort who had relatively lower levels of prior attainment than their gifted and talented cohort peers
- the academic attainment, at key stage 4, of mentees in low performing schools
- the level of attainment of mentees in high performing schools
- the attitudes of mentees to learning (the attitudinal factor most strongly associated with attainment) and to school (a positive change over time was associated with higher attainment).

While this association was not uniform, these findings are an early indication that the strategies and activities being implemented under EiC may be contributing to a reduction in under-performance in EiC schools.

ANNEX 1A): The Policy Strands and Overall Aims of Excellence in Cities

Excellence in Cities (EiC) was launched in September 1999 as the Government's key policy initiative for redressing educational disadvantage and underperformance in schools located within the most deprived urban areas of England. It has taken forward the Government's commitment, stated in the 1997 White Paper, *Excellence in Schools,* to create '*inclusive schooling which provides a broad, flexible and motivating education that recognises the different talents of all children and delivers excellence for everyone*'. EiC attempts to address the wide range of needs present in city schools by adopting a multi-strand approach to raising standards and performance and emphasising the use of locally based partnership approaches and targeted provision. The seven policy Strands are:

♦   Gifted and Talented programme

♦   Learning Mentors (LMs)

♦   Learning Support Units (LSUs)

♦   City Learning Centres (CLCs)

♦   EiC Action Zones

♦   Specialist Schools in EiC areas

♦   Beacon Schools in EiC areas.

While a number of these Strands are not entirely new in *concept*, what is new is the way in which the policy is being *delivered* and *organised*. A central feature of the policy, for example, is '*diversity of provision within a coherent framework*'.

In summary, the aims are to (a) ensure that all young people reach 16 with the **highest standards of basic skills** and a secure **foundation for lifelong learning**, **work** and **citizenship** and (b) secure better **public confidence** and esteem for city schools. In addition, the initiative is charged more specifically with:

♦   Raising overall achievement to levels comparable with those of international competitors[44]

♦   Promoting inclusion, for example, through tackling barriers to learning[45]

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[44]   While UK qualification values for young people progressing beyond lower secondary education compare favourably with the OECD mean (11% of 20-24 year olds in the UK have not gone beyond lower secondary education compared with an OECD mean of 24%), there are still a substantial proportion of young people not achieving basic qualifications (deemed to be above grade C at GCSE). See CENTRE FOR EDUCATIONAL RESEARCH AND INNOVATION (1998). *Education at a Glance: OECD Indicators 1998.* Paris: Organisation for Economic Co-operation and Development. Figures cited in MORRIS, M., NELSON, J. and STONEY, S.M. with BENEFIELD, P. (1999). *Disadvantaged Youth: a Critical Review of the Literature on Scope, Strategies and Solutions* (DfEE Research Brief No.169). Sheffield: DfEE.

[45]   In 1998, for example, 82% of 16 and 17 year olds in the UK were in formal education or training. Across member states of the European Union, this proportion was lower only in Portugal and Greece, while the proportion in post-18 formal education or training (55%) was the same or lower only in Portugal (55%). CENTRE FOR EDUCATIONAL RESEARCH AND INNOVATION (1998). *Education Policy Analysis 1998.* Paris: Organisation for Economic Co-operation and Development.

- Improving the quality of teaching (including promoting innovations through the use of information and communication technology – ICT)

- Strengthening the recruitment and training of teachers and headteachers

- Reducing levels of youth crime[46]

- Improving the quality and continuity of learning in the transition from primary to secondary education.

ANNEX 1B): Aims and objectives of the evaluation of EiC

The overall aims and objectives for the national evaluation of EiC are to:

- Establish the effectiveness of EiC in terms of:
  - its impact on the nature of **inputs** (for instance, the quality of teaching, use of ICT, diversity of student experiences, etc.) to the educational process
  - the **processes** through which inputs are implemented, and by which outcomes and outputs are achieved
  - the impact on the **outputs** and **outcomes** of the educational process (such as improved test/examination results; improved attendance; improved motivation; better destinations; increased public confidence in schools; improved employer perceptions of students; lower rates of exclusion and of youth crime; fewer barriers to learning)
  - its **cost-effectiveness, value for money** and as far as possible, the **cost-benefits**. The evaluation is attempting to assess these on Excellence in Cities' own terms and relative to other programmes with which it merits comparison.
- Identify and evaluate the **additionality** that the processes and outcomes of EiC bring to city schools, teachers and pupils, the **displacement** and **substitution** effects that have occurred and the **externalities** (indirect consequences or benefits) that arise from the policy.

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[46] The proportion of 10 to 17 year olds in young offenders institutions or prisons rose by nearly 40% between 1993 and 1997 to almost 11,000 (1% of the cohort). However, the proportion of that age group with a conviction declined by 13% (from 143, 000 to 124,000) over a similar time period. HOWARTH, C., KENWAY, P., PALMER, G. and STREET, C. (1998). 'With a criminal record.' In: HOWARTH, C., KENWAY, P., PALMER, G. and STREET, C. (1998). *Monitoring Poverty and Social Exclusion: Labour's Inheritance*. York: Joseph Rowntree Foundation.

ANNEX 2   Structure of the survey cohorts

	2000/01	2001/02	2002/03
Cohort 1	Year 7	Year 8	Year 9
Cohort 2	Year 8	Year 9	Year 10
Cohort 3*	Year 9	Year 10	Year 11
Cohort 4	Year 10	Year 11	Year 12 (or equivalent)
Cohort 5	Year 11	Year 12 (or equivalent)	Year 13 (or equivalent)

*Cohort 3 includes a comparison group in non-EiC schools

ANNEX 3   Towards multilevel modelling – a summary

An exploration of the relative impact of Excellence in Cities requires a systematic approach to the analysis of the available statistical data. In order to assess the ways in which, for example, young people's attitudes towards learning are associated with the range of different policy-related and other inputs to which young people are exposed, a complex set of variables need to be examined. Young people in participating schools come from a variety of home and school backgrounds, have different academic abilities and have been exposed, to varying degrees, to a range of different educational experiences. All of these could be expected to have an impact on their attitudes towards learning, as well as on their attainment.

Since the data to which the research team has access is hierarchical (variables can be identified at distinct levels – that of the partnership, the school and the student) the research team adopted the use of a multilevel modelling approach to data analysis for this aspect of the study. In multilevel modelling, the process is begun by identifying an outcome variable (for example pupil attainment, attitudes or actions), then, for each level of the data, the background variables that might be thought to influence that outcome are defined. Regardless of the outcome variables that are selected, it is expected that there will be differences of outcome at each level:

- **individuals** will be different from each other

- individuals within one **school** will be **collectively different** from those in other schools, and

- individuals within schools implementing a specific policy, initiative or activity will be **collectively different** from those in schools not implementing the policy initiative or activity.

These differences can be measured in terms of the extent to which each outcome variable is 'conditioned' by the background variables at each level. For example, the effect that being included in the gifted and talented cohort is having on any pupil can be assessed through comparing the mean observed difference in the attainment, attitudes or behaviour of that young person with the expected mean for all young people in the survey, taking into account the relevant background variables at school and pupil level (including prior attainment).

By analysing the data in this way, it is possible to see the overall effects of each of the variables and identify the variables which have a significant impact. However, it should be remembered that:

- no multi-level model is likely to include every possible variable. The background variables to be included in the models that will be developed for the evaluation of Excellence in Cities will be:
  - those which are known from past and current research to be relevant to pupil outcomes
  - those which are specifically related to the policy area.

- the models do not identify causality in a definitive way, but simply indicate significant factors which appear to bear some relationship to the outcomes. For instance, in the evaluation of Excellence in Cities, the self-reported behaviour and attitudes towards education of Year 11 pupils designated as gifted and talented appear more positive than those expressed by other pupils with the same prior attainment score at key stage 3. However, it is not possible to ascertain whether these attitudes entirely pre-dated EiC (and may even have contributed to the designation of the young person as gifted and talented) or whether they had become more evident as a result of the activities in which they had taken part as a result of EiC.

- a multilevel model is only as good as our understanding of the educational processes at work in influencing young people's attitudes, aspiration and motivation.

In order to prepare the data for inclusion in the models, the items in the questionnaires need to be reduced to a more manageable data set. Ideally, data needs to be either *dichotomous* (for example male or not male) or *continuous* (in which the variable can take any value over a given range). The data in the surveys had, therefore, to be manipulated in order to provide information that could be used in the models. This data manipulation has largely been accomplished through the use of factor analysis, although other scoring or pattern identification techniques have been used where more appropriate.

The following approach was used to derive composite scales from selected questions and items on the pupil questionnaire. Groups of items from the pupil questionnaires were drawn on to create composite scales and factors for young people in **Year 9**:

- Young people's views of their teachers

- Young people's views of their school

- Young people's views of the facilities in their schools

- Young people's views of the help and support they received in school

- Young people's views of the school-run activities available to them in and out of school hours

- Young people's views of the extent to which they had contact with students in other schools

- Young people's views of the degree of support they received from home

- Young people's comments on their parents' view of education

- Self-reported attendance, punctuality and behaviour

- Self-reported study and key skills etc.

These items were also explored for young people in **Years 7, 8, 9, 10 and 11**, with the addition of items linked to pupils' views on preparation for the future in the surveys of young people in Years 10 and 11. It should be noted that certain questionnaire items do not lend themselves to factor analysis and have been used to develop dichotomous variables that represent a pattern of activity (such as pupil has talked to

educational professionals about higher education/pupil has not talked to educational professionals about higher education) rather than a factor score. These items will be used in the models, but their detailed construction is not discussed here.

In each case, an appropriate strategy was adopted to deal with small quantities of missing data (generally, this meant recoding to the mean). Exploratory factor analysis was then used, where appropriate, to ascertain whether items related to one another. Questions or individual items with large quantities of missing data were omitted from the factor analysis.

Following rotation, items that appeared to relate closely (i.e., with a loading greater than at least 0.4) were grouped together as a scale. Scores for each scale were than calculated as a sum of the item responses. In general, items were scored so that positive or stronger responses were given higher values. The main exception to this rule was with the scale relating to the helpfulness of teaching strategies. Here a score of 2 was given if a pupil reported that they found teaching method helpful *and* was being taught in that way in at least a few subjects. A score of 1 was given if the young person found the method helpful but was not being taught in that way in any subject. A score of zero was given if the pupil did find the given method helpful, whether or not they were being taught in that way. In this way, more weight was given to the opinions of pupils who were expressing views about teaching methods they experienced.

These scales were then submitted to a test of reliability (Cronbach's alpha) to examine the extent to which the items which made up the scale were mutually correlated and hence measuring essentially the same construct. Values close to 1.0 are perfect, and values around 0 would imply no mutual relationship (note that the reliability index tends to increase with number of items in the scale). Second order factor analysis was then used to identify any groups of factors that related together. Scales based on these second order factors were used in the development of the multilevel models.

YEAR 9   Factors and derived scales

Table 1 shows the pupil attitude scales that were developed for **Year 9** students, based on the first order factors. It summarises the items on which they were based, their mean values and their reliability indices. Scales with a low level of reliability are italicised.

Table 1:   Attitude Scales (Year 9)

Scale Name	Scale Items based on questions in pupil questionnaire	Description	Number of Items	Reliability of Scale
VIEWTEACH	Q3[a-e,g,h, j],Q20[e,i, k,l]	Positive view of teachers	12	0.79
VIEWSCHL	Q20[a,b,c, g,j],Q21[a,e]	Positive view of school	9	0.76
AVIEWSCHL	Q20[d,f,h]	Adults, parents and pupil think good school	3	0.76
SOMET	Q21[b,c,d]	Negative attitudes to education	4	0.55
EVERYHLP	Q1ii [a-f]	Find everything helpful	6	0.68
FACILS	Q6[a-i],Q7	View of facilities	10	0.74
NONCU	Q5[a-h]	Degree of non-curricular involvement	8	0.74
OTHERS	Q5ii[a-h]	Degree of involvement with other schools	8	0.73
EXTSUP	*Q2[A,B]*	*Extra support from school*	*2*	*0.36*
TCHVAR	*Q1[B-F]*	*Teaching variety*	*5*	*0.33*
STRUG	*Q12[D,F]*	*Want more help*	*2*	*0.18*
HOMEHLP	Q10[a,b1-b5]	Help with schoolwork outside school	6	0.57
TRULATE	Q13,Q14	Truancy and lateness	2	0.45
WELLBEH	Q9[a,c]	Good behaviour	2	0.64
STUDYSKL	Q12[a,c,e,i]	Good at working on own, seeking information and solving problems	4	0.48
ORGSKL	Q12[d,g,h]	Organisational skills	3	0.41
PARINT	Q18[a-d]	Parental Interest	4	0.67

In order to look at differences between groups (for example, between males and females in EiC schools) t-tests were conducted for all of the first order scales.

Table 2 summarises the second order factors.

Table 2:   Second Order Factors (Year 9)

Name of scale	First order scales included in scale	Description of Scale
FF1	VIEWTEACH AVIEWSCHL *EXTSUP* FACILS NONCU *TCHVAR*	Positive view of supportive nature of school and the range of activities it provides
FF2	VIEWSCHL WELLBEH (-)TRULATE (-)SOMET	Positive attitudes to school and education and well-behaved pupil
FF3	STUDYSKL STUDYSKL	Independent learner
FF4	EVERYHLP OTHERS	Support in school and links with other schools
FF5	HOMEHLP *STRUG* PARINT	Supportive parents

YEAR 11   Factors and derived scales

Table 3 and **Table 4** relate to the first and second order factors derived for Year 11. There is a clear level of overlap between many of the factors that emerged for the two year groups, although some items had higher levels of reliability in the analysis conducted for Year 11. As in the analysis for Year 9, and in order to look at differences between groups (such as males and females in Phase 1 schools), t-tests were conducted against all of the first order scales.

Table 3:   First order factors (Year 11)

Scale Name	Scale Items based on questions in pupil questionnaire	Description	Number of Items	Reliability of Scale
VIEWTEACH	Q3[a-e,g-i],Q20[g,i,k,l]	View of teachers	12	0.82
(NEG)VIEWSCHL	Q21[b,c,d] - (Q20[a,b], Q21[a,e])	Negative view of school	7	0.77
AVIEWSCHL	Q20[d,e,h]	Adults, parents and pupil think good school	3	0.80
TCHRELA	Q20[a,c,j], 21[a,e]	Attitudes to education and relationships with teachers	5	0.68
EXTSUP	Q2[a,b],Q23[a1,a2,a3,a4,b]	Extra support from school	7	0.70
EVERYHLP	Q1ii [a-f]	Find everything helpful	6	0.62
FACILS	Q6[a-i],Q7	Views on facilities	10	0.73
NONCU	Q5[a-h]	Degree of non-curricular involvement	8	0.70
TCHVAR	Q1[a-f]	Teaching variety	6	0.37
PREPEXAM	Q20[F]	School should concentrate more on exams	1	NA Single item
OTHERS	Q5ii[a-h]	Degree of involvement with other schools	8	0.72
HOMEHLP	Q10[a,b1-b5]	Help with schoolwork outside school	6	0.63
TRULATE	Q13[a,b], Q14[a,b]	Truancy and lateness	4	0.66
WELLBEH	Q9[a,c]	Good behaviour	2	0.59
PLANSKL	Q12[d,h,i]	Planning skills	3	0.54
STUDYSKL	Q12[a,b,f,j]	Good at working on own, seeking information and solving problems	4	0.49
STRUG	*Q12[c,e,g]*	*Want more help*	*3*	*0.30 Low reliability*
WANTSTAY	Q22[a,b,h] -Q22[c]	Want to stay at school	4	0.43
JOBWOR	*Q22[d,f,g]*	*Worried about getting a job*	*3*	*0.31 Low reliability*
PARINT	Q18[a-d]	Parental Interest	4	0.67

Table 4: Second Order Factors (Year 11)

Name of scale	First order scales included in scale	Description of Scale
FF1	VIEWTEACH AVIEWSCHL TCHRELA *EXTSUP* FACILS NONCU *TCHVAR*	Positive view of supportive nature of school and the range of activities it provides
FF2	WELLBEH WANTSTAY (-)TRULATE (-)(NEG)VIEWSCHL	Positive attitudes to school and education and well-behaved pupil
FF3	STUDYSKL STUDYSKL	Independent learner
FF4	EVERYHLP OTHERS	Support in school and links with other schools
FF5	*STRUG* *JOBWOR* PREPEXAM	Want more help in school, concerned about future and think school should prepare more for examinations
FF6	HOMEHLP PARINT	Supportive parents

ANNEX 4   Outcomes of the multilevel models for attendance

Among the 7,455 pupils from the two Year 11 cohorts (2001 and 2002) for whom data was available, nearly 25% of the young people (that is, some 1,835 pupils) had periods of unauthorised absence when they were in Year 10, with those young people missing, on average, 9.4 half days each. A higher proportion of young people (nearly 92%) had periods of authorised absence, with those who were absent missing, on average, 27.9 half days. The story was similar in Year 9, although the proportion of the cohort who had at least one period of unauthorised absence was much higher at 40% of the 9,743 pupils in the two Year 9 cohorts (2001 and 2002) for whom data was available. These 3893 young people missed, on average, 8.8 half days each. The 94% of the cohort who had some period of authorised absence was broadly comparable to the Year 11 cohort, with an average of 26.7 half day sessions missed. It is not possible to examine the extent to which this reflects national data, since DfES statistics are not collated in this way at present.[47]

Drawing any substantive conclusions about authorised absence is difficult, since, despite specific DfES guidelines, there are a number of issues related to the ways in which absence is authorised by schools and the extent to which schools are able to verify the authenticity or legitimacy of such absence. Equally, while unauthorised absence is less subject to individual interpretation, details on both periodic or *ad hoc* withdrawal from school that is *less* than a half-day session (such as absence from particular lessons) may not necessarily be recorded as absence.

Even with these caveats, however, there are some points from the models that are worth highlighting. Incidences of **authorised absence** were higher amongst young people in the 2002 cohort (who, it may be remembered, had lower levels of overall attainment), with an additional 5.11 half day sessions being recorded for young people from this cohort. This may mean that the actual incidence of authorised absence was higher or that schools had simply become better at recording it. Authorised absence across the two Year 11 cohorts (2001 and (2002) when they were in Year 10 was highest amongst:

♦ those entitled to free school meals (equivalent to 6.24 half day sessions more than those not in receipt of them)

♦ those with a high incidence of unauthorised absence (equivalent to 2.54 additional sessions of absence)

♦ girls (equivalent to 4.4 more half day sessions than boys)

♦ those who, in their responses in Year 11, indicated that they were confident and independent learners (equivalent to 1.83 additional half day sessions). However, it should be noted that the number of additional sessions missed by these young people was reduced to 1.39 where young people had seen a Mentor

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[47]   Providing comparative analyses with national figures is problematic, since a) DfES statistics are presented as the mean of all young people in a school and are not calculated by cohort and b) DfES statistics (both authorised and unauthorised figures) are calculated on the basis of all young people, whether or not they had any period of absence and not (as is the case here) on the basis of young people who were known to have a period of absence.

- young people who had been excluded on at least one occasion over the previous twelve months (equivalent to an average of 6.15 additional half day sessions).

The association that was also noted between those who had a poor record of attendance in Year 10 and those who had seen a mentor in Year 11 suggests that, in addition to those who are underachieving, the Learning Mentor Strand continues to be targeted at those with a high level of absence (young people who had seen a mentor, had on average the equivalent of 1.3 sessions of authorised absence more than their peers). However, as indicated above, there was evidence that mentors may have played a role in reducing the level of absence amongst some groups of young people – those who saw themselves as confident and independent learners.

Once prior attainment was taken into account, authorised absences were **lowest** amongst:

- black pupils (lower by 7.43 half day sessions than white UK pupils) and Asian pupils (lower by 3.55 half day sessions)

- pupils in London (lower by 5.14 half day sessions), where, it may be remembered, attainment at key stage 4 was higher than would have been predicted, given pupils' prior attainment

- young people who lived with their father (lower by 4.73 half day sessions)

- pupils who had positive attitudes to education (lower by 4.65 half day sessions)

- young people designated as gifted and talented (lower by 3.61 half day sessions)

- young people from schools where setting was the dominant mode of organisation at key stage 4 (lower by 4.06 half day sessions)

- those who reported more books in the home (lower by 0.76 half day sessions).

Given the nature of authorised absence, these findings raise a number of questions that cannot be answered through analysis of the survey data alone. Do girls have higher incidences of absence than boys, or are they simply more likely to have sought authorisation for their absence (which might include bringing – or even, in some cases, forging – notes from home)? Does setting contribute to young people's confidence in their ability to keep up with the rest of their peer group, or does it simply reflect the learning ethos of the school? Are 'independent' learners more likely to be absent than those who feel they need support from their school? As indicated in 2001, this particular association, between independent learners and absence, is *not* related simply to young people's ethnicity, sex or attitudes to education. More black pupils reported high levels of confidence in their work strategies, for example, but more white pupils were included amongst those for whom high levels of authorised absence were noted.

The story in the Year 9 cohort was somewhat more straightforward, with higher incidences of authorised absence amongst those with a history of unauthorised absence (equivalent to 5.04 sessions) and those who had been excluded (equivalent to an average of 9.2 sessions). Young people in receipt of free school meals had higher levels of absence (equivalent to an average of 5.43 sessions) and, as amongst the Year

11 cohort, so did girls (2.08 sessions).[48] Those pupils who had seen a Mentor in Year 9 were more likely to be those who had a poor record of attendance when they were in Year 8. However, it is worth noting that *lower* incidences of authorised absences were associated with young people with a positive attitude to learning, to gifted and talented pupils, to pupils from Caribbean (though see below), Indian, African, Chinese and other black ethnic backgrounds.

The story for **unauthorised absence** was much clearer, with significant associations between a high incidence of absence (in Year 8) amongst the Year 9 cohort, young people who had been excluded at least once during that academic year, Caribbean pupils, pupils from 'other' black backgrounds, those in receipt of free school meals and those who had high levels of authorised absence. Fewer incidences of unauthorised absence in Year 8 were significantly associated with those with a positive attitude to their school work in Year 9, a situation also reflected in the Year 11 cohort.

Some regional variations were observed, with higher incidences of authorised absence in the West Midlands and higher incidences of unauthorised absences in the South West.

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[48] The picture in the Year 8 and 10 cohorts is similar to that found for the Year 9 cohort.

ANNEX 5   Outcomes of the multilevel models for exclusions

Across both the Year 9 and the Year 11 cohorts, the probability of fixed term exclusions was greater amongst:

♦ boys

♦ young people with special educational needs

♦ young people who had seen a mentor.

Lower levels of exclusion were evident where:

♦ young people lived with both parents (and in the case of Year 11, where they lived with their mother) than where they lived with neither parent

♦ where young people had positive attitudes to learning.

Some cohort differences emerged, however, with young people in low performing schools in Year 9 having a higher probability of exclusion (no such association was evident in Year 11). In Year 11, young people in the 2002 cohort were more likely to have been excluded than those in the 2001 cohort. Although no significant overall ethnic minority differences emerged across either cohort, one significant difference was evident: black girls in the Year 11 cohort were five times more likely to have been excluded than black boys or white UK girls or boys.