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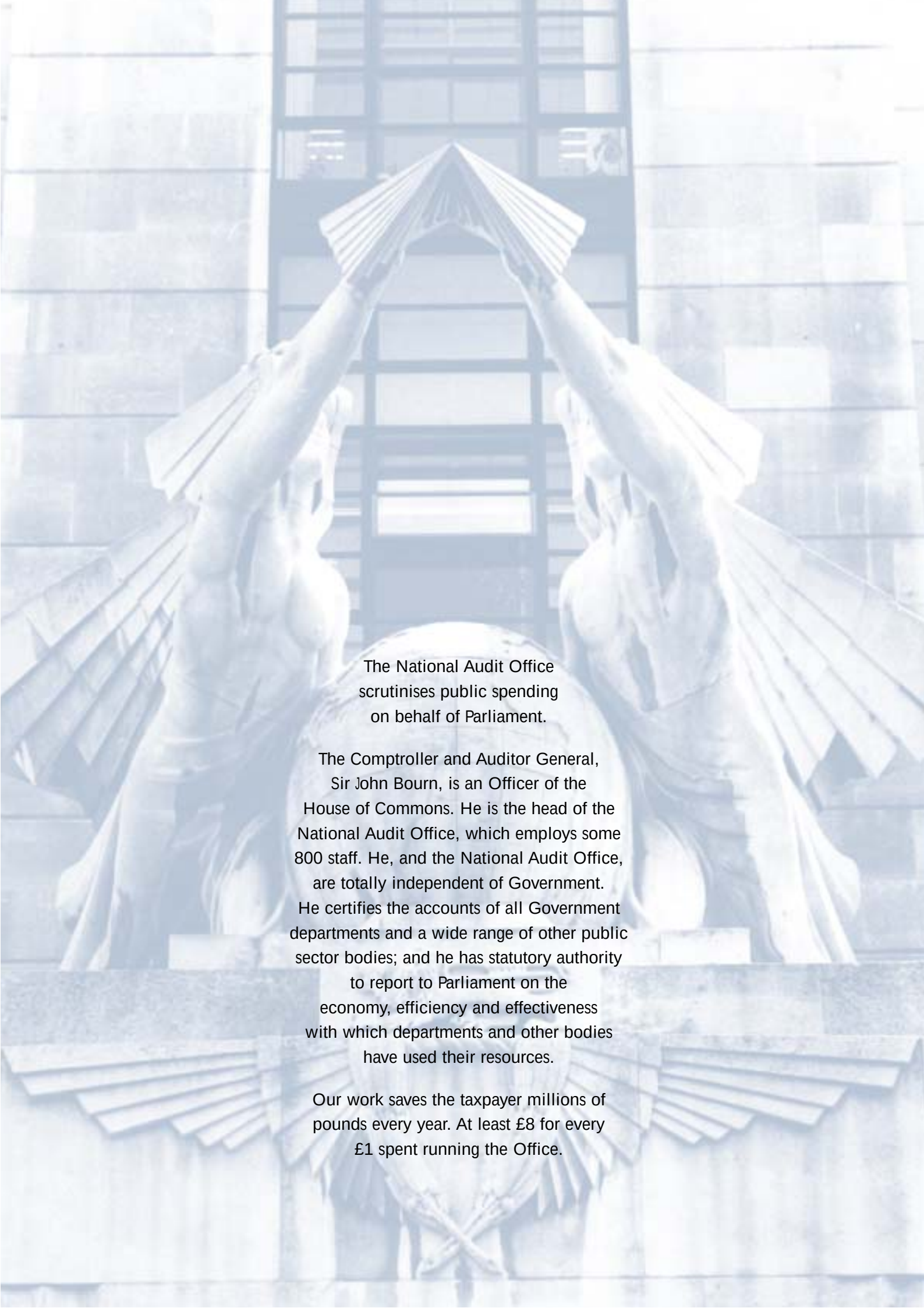
Making a difference

Performance of maintained secondary schools in England

REPORT BY THE COMPTROLLER AND AUDITOR GENERAL
HC 1332 Session 2002-2003: 28 November 2003



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Comptroller and Auditor General

National Audit Office
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Preface

The Committee of Public Accounts has expressed interest in the results achieved by the substantial expenditure on secondary education. It is by no means straightforward to capture and appraise the relative success of a system comprising more than 3,400 maintained schools providing education to almost three million pupils. This report nevertheless seeks to provide an assessment of the overall system and to make recommendations for improving the performance of secondary schools. The methodology we have used is explained in the appendices to the report and our recommendations are consolidated at the end of the Executive Summary.

The academic achievements of a secondary school's pupils are mostly influenced by:

- the quality of education provided by the school; and
- factors external to the school, including the prior academic achievements of pupils in earlier stages of their education, and their economic, social and cultural backgrounds.

Whereas schools can largely control the quality of education, external factors - which can also have a strong influence - are largely outside their control. Therefore, for the performance of different schools to be compared on a like-for-like basis, the influence of external factors on each school and its pupils needs to be taken into account.

This report examines the amount of difference schools have made to the academic achievements of pupils once some important external influences on performance have been taken into account. The analysis is based on data for more than one million pupils in more than 3,100 schools who sat their Key Stage 3 tests or GCSE examinations in 2002 (Part 2 of the report). When those external factors for which data are available are taken into account, the effect is to change the performance ranking of many schools, in terms of the difference they make to the academic achievements of pupils. A further effect is to narrow the gap between the highest and lowest performing schools, although there remain considerable differences between high and low performing schools.

The report also considers the characteristics of schools that are providing a good quality education (Part 3). These relate to ethos, leadership, management, teaching, parental and community links, and pupil attendance and behaviour. Although these characteristics can take many different forms, there are strong links between them.

The report recommends that the Department and Ofsted should make more routine use of measures that adjust for external factors in assessing and seeking to secure improvements in performance, and to further improve the way they target their efforts towards those schools most in need of support.

executive summary

1 Almost three million pupils aged between 11 and 16 attend one of more than 3,400 maintained secondary schools in England. Successive education policies have created many different types of maintained secondary school[1], including selective (grammar) schools, specialist schools, faith schools, academies, beacon or leading edge schools, single sex schools, and schools in Education Action Zones or Excellence in Cities areas. Schools may fit more than one category. For example, there are selective, single-sex, faith schools.

2 Improving the academic achievements of all secondary school pupils in England is a key priority of the Department for Education and Skills (the Department). In recent years, overall academic achievement has improved, and the Department has ambitious targets for further improvement.

3 This report examines the amount of difference secondary schools in England are making to the academic achievement of pupils once some important external influences on performance have been taken into account. Our analysis is based on data for more than one million pupils in more than 3,100 schools[2] who sat their Key Stage 3 tests or GCSE examinations in 2002 (Part 2 of the report). The report also considers the characteristics of schools that are providing a good quality education (Part 3).

Measuring and assessing academic achievement

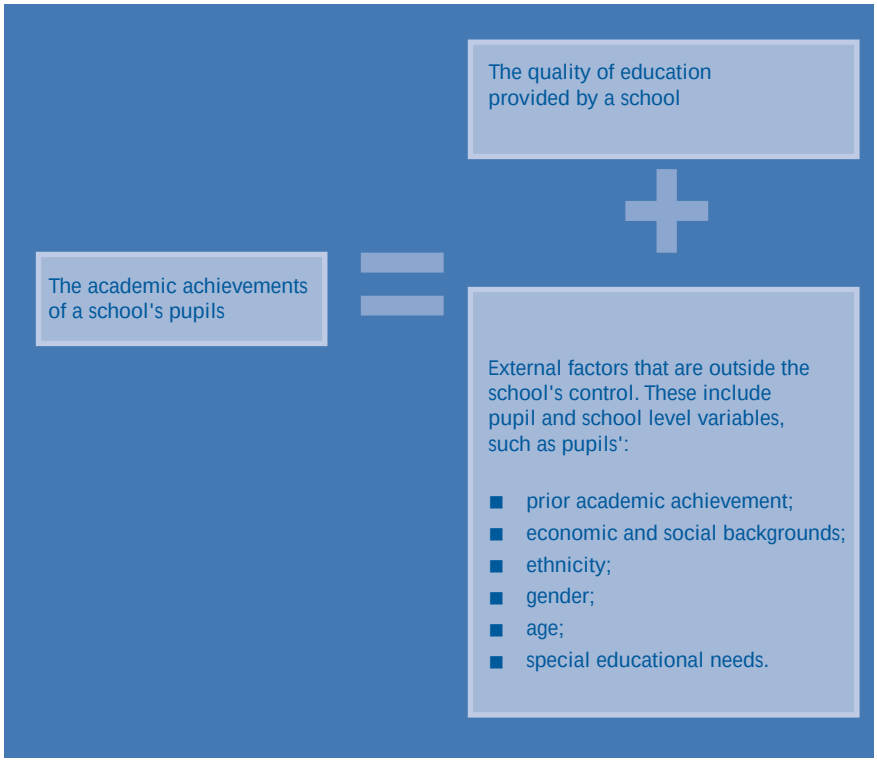
4 The academic achievements of pupils aged between 11 and 16 are assessed by:

- National Curriculum Key Stage 3 tests at the age of 14; and
- General Certificate of Secondary Education (GCSE) and General National Vocational Qualifications (GNVQ) examinations at 16.

5 Each year, the Department publishes performance tables that show, for each maintained secondary school, a summary of the performance of the school's pupils in Key Stage 3 tests and GCSE/GNVQ examinations. The tables contain some useful information. For example, they show the contribution of a school's pupils towards the achievement of the Department's targets. However, they are of only limited value in comparing the performance of different schools, types

1 Appendix 1 provides information on types of maintained secondary school.
2 Not all maintained secondary schools in England had pupils who sat Key Stage 3 tests or GCSE examinations in 2002, or had matched data on prior academic achievement.

of school, and the same school from one year to the next. This is because the academic achievements of pupils are influenced not only by the quality of education they receive, but also, to varying degrees, by external factors that are outside schools' control.



Measuring the performance of schools

6 To allow the performance of different schools to be compared on a more like-for-like basis, the current academic achievements of pupils need to be adjusted to allow for the influence of external factors on each school and its pupils. External factors include the prior academic achievements of pupils in earlier stages of their education, and their economic, social and cultural backgrounds.

7 The Department's performance tables for 2002 included, for the first time, performance measures of the academic achievements of each school's pupils, relative to the national average for pupils of equivalent prior achievement. This is an important step forward. However, the assessment took no account of other external influences on performance, particularly pupils' economic, social and cultural backgrounds.

Results of our assessment of academic achievement taking external factors into account

8 Based on 2002 Key Stage 3 test and GCSE/GNVQ examination results, we analysed the performance of secondary schools by adjusting the academic achievements of pupils for prior academic achievement and some other external influences on performance. It is only possible to adjust academic achievement for those external factors for which the relevant information is available. We were therefore able to include factors such as pupil age, gender, ethnicity and eligibility for free school meals, but not others, such as school funding, the age and condition of school buildings, and parental occupation and education levels, which are also likely to influence academic achievement.

The methodology for this study is set out in Appendix 2 on pages 37 and 38. An outline of the data and methodology for the quantitative analysis, and the detailed results, are set out in Appendix 3 on pages 39 to 44.

9 The findings and conclusions drawn from our analysis are in keeping with much other research into the performance of secondary schools in England, including analysis that the Department published in June 2002[3]. However, our report provides new insights by illustrating the considerable effects on academic achievement data when external factors are taken into account. An explanation of this effect is provided in **Box 1**.

BOX 1

Example of the effect of measuring the difference schools make to the academic achievements of pupils once external factors are taken into account

In any one year, pupils in School A achieved on average more GCSEs with better grades than pupils in School B. Based solely on the academic achievements of pupils at GCSE level, School A was clearly performing better than School B.

However, when compared with School A, the pupils in School B who sat their GCSEs had, on average, achieved lower levels at Key Stage 3. They also lived in areas of higher economic and social deprivation (such that School B had a higher proportion of pupils eligible for free school meals), and School B had a higher proportion of pupils with special educational needs.

School B therefore faced more substantial barriers to raising academic achievement than School A. When these barriers are taken into account, the results of the analysis may be reversed - School B may be shown to be making a greater difference than School A to the academic achievements of its pupils, in the light of external influences on performance.

10 There are wide variations between the average academic achievements of pupils in different schools at both Key Stage 3 and GCSE level. Our analysis showed that the variations diminish substantially when adjustments are made for pupil prior academic achievement and other external factors, although there remain considerable differences between high and low performing schools.

11 Taking account of external factors can make a big difference in the ranking of individual schools. For example, of the 621 schools ranked in the bottom 20 per cent of performers in terms of academic achievement at GCSE level in 2002, just 272 remain in the bottom 20 per cent when academic performance is adjusted for the influence of external factors, and 60 of the schools move up to the top 20 per cent. Conversely, the ranking of some highly ranked schools falls when external factors are taken into account.

3 *National Statistics Bulletin - "Statistics in Education: Pupil progress in secondary schools by school type in England - 2001", Issue No 05/02, June 2002.*

12 We concluded that there are risks in assessing the relative performance of individual secondary schools (as opposed to the secondary school education system as a whole) based solely on unadjusted academic achievement. Measures that adjust academic achievement for the influence of external factors, and which aim therefore to assess the difference that schools make, are more meaningful measures of individual school performance.

13 Our analysis suggested some associations between different types of school and the difference they make to academic achievement. Based on academic achievement adjusted for external factors, selective schools, specialist schools, faith schools, beacon schools and single sex schools (both boys and girls) achieved, on average and to varying degrees, a higher ranking than the average for all schools, at either Key Stage 3 or GCSE level, or both. However, the cumulative difference exceeded an average of one grade in one subject per pupil at GCSE level only for specialist schools, beacon schools and the very small number of Jewish and "other faith" schools. As a group, selective schools performed significantly better than average at Key Stage 3, but below average at GCSE level. Schools in Education Action Zones performed slightly below average at GCSE level.

14 Our analysis does not explain the reasons for the associations. For example, there are specialist schools with a relatively low ranking, as well as those that are ranked relatively highly. However, they do suggest that when compared with other types of school, the average specialist school, for example, has certain characteristics associated with good performance. The Department suggested that the results for Education Action Zones may reflect the zones' focus on primary schools in their first three years to 2001 and 2002.

15 As explained in paragraph 8, our analysis was limited by our only being able to adjust for those external factors for which relevant information was available. Of these, prior academic achievement had the strongest association with current academic achievement. Eligibility for free school meals also has a strong (negative) association with academic achievement. However, eligibility for free school meals is a fairly imprecise indicator of the economic position of a pupil's family. It does not assess relative economic well-being or capture other social, cultural and environmental factors that might also have a strong influence on academic achievement.

16 The associations between the ethnic backgrounds of pupils and their academic achievements are highly complex. Recent research has indicated that some ethnic minority groups achieve substantially less than white British pupils[4]. Our analysis suggests that, although some ethnic minority groups (Black Caribbean, Black Other, Pakistani and pupils whose ethnicity is unknown) appear to make less progress than white British pupils during Key Stage 3, all ethnic minority groups (other than pupils whose ethnicity is unknown) make better progress, on average and when other external factors are taken into account, than their white British counterparts between Key Stage 3 and GCSE, and overall, between Key Stage 2 and GCSE. Hence the difference between the unadjusted academic performance of white British pupils and these ethnic minority groups is probably due largely to factors external to schools, although schools have a role in reducing the influence of these factors.

17 Other external factors that have a significant, though relatively small, association with academic achievement include: girls perform better overall than boys, younger pupils on average make slightly more progress than older pupils, and pupils with special educational needs make relatively less progress.

4 "Educational Inequality: Mapping Race, Class and Gender. A synthesis of research evidence" by David Gillborn and Heidi Safia Mirza, Ofsted, 2000; and "Minority Ethnic Attainment and Participation in Education and Training: The Evidence", Department for Education and Skills, 2003.

Using information on school performance

18 Our analysis of Ofsted's[5] assessments of the quality of education provided by secondary schools indicated that the assessments were more closely related to the unadjusted academic achievements of pupils than they were to academic achievement adjusted to take account of external factors. This suggests that, in reaching their judgements about the overall effectiveness of secondary schools, Ofsted inspectors should give greater consideration to the external factors that influence academic achievement.

19 Ofsted aims to inspect all maintained secondary schools in England within a six year cycle, although the frequency and depth of inspections are tailored to the performance and circumstances of each school. Ofsted should use the improved data relating to the factors influencing academic performance, that are now becoming systematically available, to further inform and refine its risk-based approach to inspections.

20 The Department could also use the more comprehensive information on school performance to provide a more robust picture of individual schools, and to provide the schools themselves with comparative information on both performance and on schools facing similar challenges from external influences on academic achievement.

Influence of Departmental targets

21 Departmental targets can influence the priority schools give to different pupils. In particular, as a result of the Department's key threshold targets at Key Stage 3 and GCSE level, some of the schools we visited focused additional teaching resources on pupils they considered to be close to the threshold. However, in addition to indicators of performance against these threshold targets, the Department's performance tables also include an indicator that shows the average academic achievements for all a school's pupils at both Key Stage 3 and GCSE level.

Improving the quality of education that schools provide

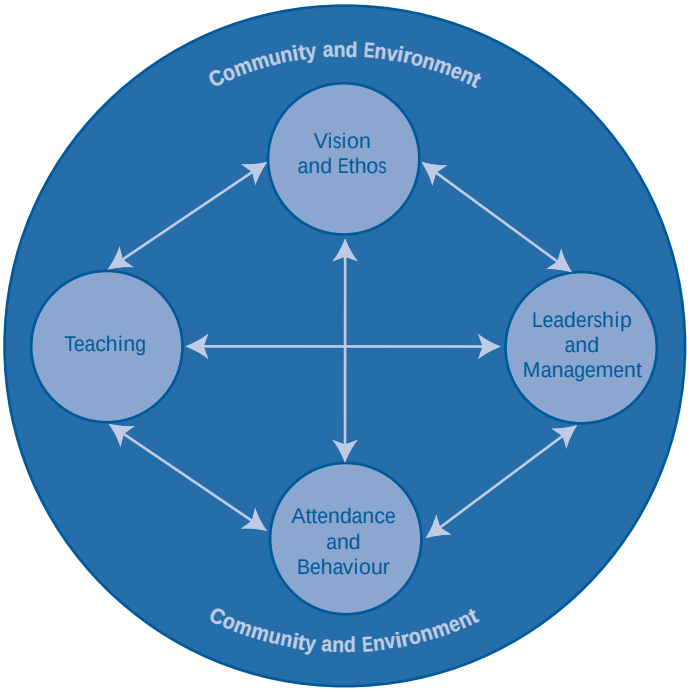
22 The characteristics of an effective school, in terms of the quality of education provided, are widely recognised. They have been promoted by Government policy and initiatives in recent years, for example through the specialist schools programme, and are the main focus of Ofsted's inspection programme. They include:

- a clear ethos or vision, related to the school's particular circumstances;
- effective leadership and management;
- high quality teaching;
- effective procedures for encouraging pupil attendance and good behaviour; and
- strong links with parents and the local community.

5 *The Office for Standards in Education, which provides for regular inspection of schools in England.*

23 Although these characteristics can take many different forms, there are strong links between them **(Figure 1)** and changes in one area can lead to changes in another. The most effective schools are those that are best able to adapt the range of characteristics to their local circumstances and priorities. For example, effective procedures for encouraging good behaviour vary from school to school, largely depending upon the characteristics and backgrounds of a school's pupils.

1 There are strong links between the characteristices that influence the quality of education that schools provide



Vision and ethos

24 Many schools have developed or are seeking to develop a positive vision or ethos that permeates the entire school and focuses on high expectations, aspiration and self-esteem. Absence of a positive vision or ethos has been a factor in some schools that were not performing well. We concluded that a positive vision and ethos is an important "marker" of good performance.

Leadership and management

25 Closely linked to ethos is the leadership that the head teacher brings to the school, and how he or she instils the necessary leadership and management skills among key staff. In schools we visited that had been experiencing difficulties, staff often referred to the absence of effective leadership and management.

26 Effective management needs to operate throughout all parts of the school and right down to the level of individual pupils - the schools we visited that were performing well or improving had all developed robust approaches to target setting and monitoring pupil progress.

Teaching

27 Our examination confirmed that issues related to teachers and teaching are crucial to a school's performance. Among 15 important influences covered in our survey, head teachers collectively gave the top ranking to "a sufficient number of qualified teaching staff with a good mix of experience". While national trends in teacher recruitment and retention are positive, some of the schools we visited found it more difficult than others to recruit and retain high quality teaching staff for a range of reasons, including difficult or unattractive working or learning environments. Although extensive use of supply teachers can reduce the quality of lessons in a school, the effect can be mitigated by developing longer term relationships between individual supply teachers and the school.

28 Effective schools invest time and resources in training and developing their teaching staff, and ensure that head teachers and senior staff are involved in developing teaching methods. Support staff and modern equipment and resources also play an important part in supporting effective teaching and learning in schools.

29 The teaching styles and environments of primary and secondary schools are dramatically different. If the transition is poorly handled, there can be an adverse effect on some pupils' progress. Measures are being developed to manage the transition and there may be benefits in applying some of the more successful measures more widely.

Pupil attendance and behaviour

30 There is a clear link between the academic progress of pupils and Ofsted's assessments of pupil behaviour. The extent to which a school experiences attendance and behaviour difficulties depends on a range of factors. Many are outside the control of the school, but the characteristics discussed above (vision, leadership, management and teaching) are not, and they all influence whether pupils want to attend school and behave well.

31 The schools we visited employed a range of different measures to discourage poor, and encourage good, pupil attendance and behaviour. The key to effective discipline is a system that pupils and their parents understand and respect, and which involves all staff implementing it consistently. Successful incentive and reward systems are those that are attractive to pupils and, therefore, influence their behaviour.

Links with parents and the local community

32 Schools have only limited influence over parents and the local community, but can take action to develop their relationship with the school. For example, schools can organise themselves to develop long term relationships with parents by having the same teacher act as head of year from the first year of entry over a number of years.

33 Encouraging schools to develop links with their local communities are important features of some of the Department's initiatives. All the schools we visited had sought to develop links with the community for the benefit of both the school and the community.

Recommendations

34 Our findings and conclusions lead to the following recommendations:

1) **The Department should produce and make publicly available performance information for maintained secondary schools that takes into account academic achievements adjusted not only for pupil prior achievement, but also for other external influences on performance, based on data that the Department now holds.** Performance measures that take account of the influence of external factors (including the economic and social backgrounds of pupils) on academic achievement provide a sound basis for assessing and comparing the performance of schools, in terms of the difference they make to the achievements of pupils. Both the Department and Ofsted agree that such measures provide important insights into school effectiveness, and see the national availability of individual pupil progress data as a highly significant development.

2) **The Department should use the adjusted performance information recommended above as a tool, amongst others, for assessing school performance and evaluating the effectiveness of policies that impact on schools.** Many policies and initiatives are aimed at improving school performance. Only by excluding the factors outside the control of schools can performance (between schools and over time) be objectively measured, and the impact of policies and initiatives objectively assessed. Performance measures adjusted for the influence of external factors should be used, therefore, as an important indicator by which schools can be held accountable for their performance, their use of resources and their contribution to improving overall standards of secondary education.

3) **In informing its judgements on the quality of education provided by schools, and to develop further its risk-based approach to inspections, Ofsted should use the improved information now becoming available to take more account of the influence of external factors on the academic achievements of pupils.** Performance information that takes account of the influence of external factors provides a more objective basis for assessing school performance than measures of academic achievement alone. Ofsted should use this improved information to refine its risk assessments of secondary schools, and to vary inspection cycles accordingly, as a means of increasing the efficiency and effectiveness of its inspection programme.

4) **The Department, in association with other departments, local authorities and other organisations with an interest in indicators of economic and social deprivation, should explore whether an indicator more sophisticated than eligibility for free school meals can be developed.** There is a strong link between academic achievement and economic and social deprivation, for which eligibility for free school meals is only a crude indicator. Improved indicators of deprivation - for example, using entitlements to social security benefits or tax credits - would improve the robustness of performance measures that seek to allow for the influence of economic and social factors on performance. Agencies assessing the feasibility of such measures would need to work through a range of issues, including data protection and data collection.

5) **The Department should ensure that schools have sufficient autonomy and flexibility in their use of resources to best meet the educational needs of all pupils.** School leadership, management and teaching styles need to be tailored to reflect the environment from which a school's pupils are drawn, and to be sufficiently flexible to meet the different educational needs of all of its pupils.

Part 1 Introduction

Background

Improving secondary education is a key priority

1.1 Almost three million young people between the ages of 11 and 16 attend one of more than 3,400 maintained secondary schools in England. Improving the academic achievements of all secondary school pupils is a key priority of the Department for Education and Skills (the Department), which has introduced a range of initiatives aimed at driving up performance.

1.2 As a result of the 2002 Spending Review, secondary schools should receive substantial additional funds over the next three years. Although the Department is unable to predict exactly how much will be spent on secondary schools, because of the complexity and range of funding streams, spending on education and skills in England is expected to rise by an average of six per cent a year in real terms over the next three years (from £45.0 billion in 2002-03 to £57.8 billion in 2005-06)[6].

The academic performance of pupils aged 11 to 16 is improving, and the Department has ambitious targets for further improvement

1.3 The academic performance of pupils is assessed by statutory National Curriculum tests at ages 7, 11 and 14, and by GCSE and GNVQ examinations at age 16 **(Figure 2)**. Although the academic achievements of secondary school pupils have shown a progressive improvement in recent years, at both Key Stage 3 and GCSE level, the Department has ambitious targets for further improvement as part of the 2002 Comprehensive Spending Review **(Box 2 and Figures 3 and 4)**.

Secondary education is being delivered by an increasingly diverse range of institutions

1.4 Successive education policies have resulted in many different types of maintained secondary school. A secondary school may be designated as one or more of the following:

2 How the academic performance of secondary school pupils is assessed

Age	National curriculum tests	Subjects
7 years	End Key Stage 1	English, Mathematics
11 years	End Key Stage 2	English, Mathematics, Science
14 years	End Key Stage 3	English, Mathematics, Science
Age	**GCSE/GNVQ examinations**	**Subjects**
16 years	End Key Stage 4	Usually at least 8 subjects, including (until 2002) English, mathematics, a science, information and communications technology, design and technology and a modern language

Source: Department for Education and Skills

6 *2002 Spending Review White Paper "Opportunity and security for all: investing in an enterprising, fairer Britain", HM Treasury, Cm 5570.*

- either a foundation, a voluntary aided, a voluntary controlled or a community school - the status primarily determines who owns the school's assets, employs the staff and sets the admissions policy;
- a selective (grammar) school - which selects its pupils for high general ability;
- a specialist school - which receives additional funds and specialises in one of ten areas;
- a city technology college or academy - which are publicly funded independent schools;
- a beacon or leading edge school - selected from among the best schools in the country, to drive innovation and share best practice with other schools;
- a school in an Education Action Zone or Excellence in Cities area - local partnerships aimed at raising standards in inner cities and other deprived areas;
- a faith school - a school designated as having a religious character;
- a single-sex or mixed gender school.

BOX 2

2002 Comprehensive Spending Review targets

Key Stage 3

By 2004, 75 per cent of 14 year olds to achieve level 5 or above in English, mathematics and Information and Computer Technology (70 per cent in science) nationally, increasing to 85 per cent (80 per cent in science) by 2007 (Figure 3).

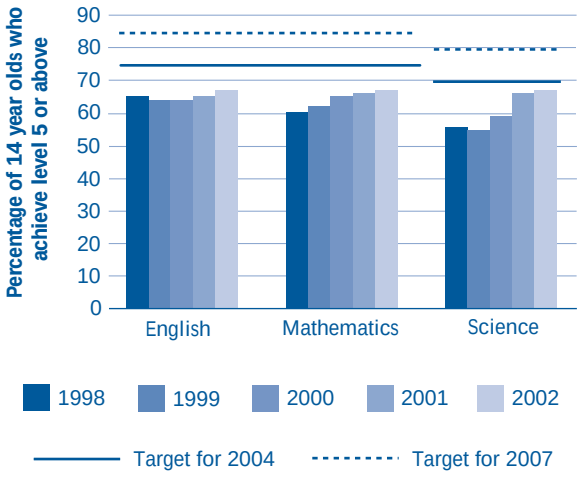
By 2007, a significant reduction in the number of schools where fewer than 60 per cent of 14 year olds achieve level 5 or above.

By 2007, 90 per cent of pupils to reach level 4 in English and mathematics by age 12 by 2007.

GCSE

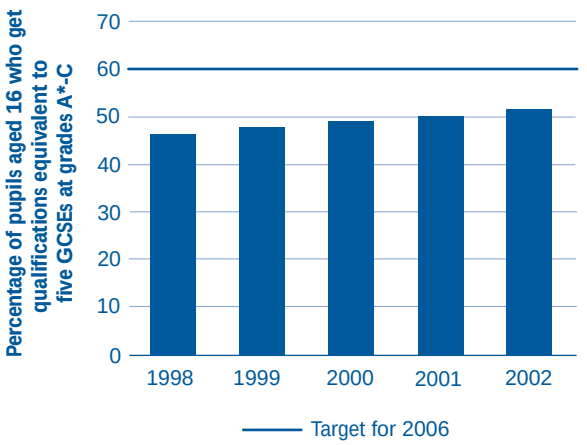
Between 2002 and 2006, the proportion of pupils aged 16 who get qualifications equivalent to at least 5 GCSEs at grades A* to C to rise by two percentage points each year on average (figure 4), and in all schools at least 20 per cent of pupils to achieve this standard by 2004, rising to 25 per cent by 2006.

3 Performance and targets for Key Stage 3 test results



Source: Department for Education and Skills

4 Performance and 2006 target for GCSE (Key Stage 4) examination results



Source: Department for Education and Skills

1.5 Details of, and the background to, each type of secondary school are at Appendix 1. Schools may come under more than one heading. There are, for example, selective, single-sex, faith schools.

The Department has launched a range of initiatives to improve the performance of secondary schools

1.6 The Department aims to raise the standard of secondary education by improving the quality of teaching and learning for all young people. It is targeting its efforts to support and challenge those schools that are failing their pupils and to support those pupils facing particular disadvantage. It is also focusing on improving standards for 11 to 14 year-olds at Key Stage 3, where it has accepted that progress has too often been too slow[7].

1.7 In February 2003, the Department set out its most recent strategy for transforming secondary education[8], which is based on creating a new system of specialist schools, building strong leadership teams, reforming the school workforce and developing partnerships beyond the classroom. The Department is also seeking to encourage increased collaboration between schools, including the establishment of federations (often between good and poorly performing schools in the same area), within a general policy of more local accountability. In addition, there is an increased emphasis on the quality of teaching, learning and forms of assessment, particularly in terms of the Key Stage 3 National Strategy.

1.8 In recent years the Department has introduced various initiatives to support the recruitment of secondary school teachers, and, between January 2002 and January 2003, the number of full time equivalent teachers employed in maintained secondary schools rose by 3,800, and the vacancy rate fell slightly to just over one per cent. Initiatives have included:

- the introduction of training bursaries for eligible secondary Post Graduate Certificate of Education (PGCE) students, and "golden hellos" for newly qualified teachers who train in and go on to teach shortage subjects;
- paying off, over time, the student loans of new teachers of shortage subjects;
- funding an increase in the number of employment-based training places in schools, in the number of college-based teacher training courses and in the number of Teacher Training Agency funded returning teachers' courses;
- funding a network of Recruitment Strategy Managers who work alongside local education authorities to support teacher recruitment; and
- creating a Recruitment and Retention Unit within the Government Office for London.

1.9 Other recent initiatives to improve educational standards and the performance of secondary schools have included the establishment of Education Action Zones (soon to reach the end of their statutory terms), the Excellence in Cities programme, the Leadership Incentive Grant, the National College for School Leadership, and an initiative to improve pupil attendance and behaviour. In all, we estimate that Departmental initiatives have cost in the region of £1 billion in 2002-03, in addition to the school funding that is channelled through local education authorities.

Ofsted has a key role in improving the standards of education in schools

1.10 The Office for Standards in Education (Ofsted) has a key role in improving standards of achievement and quality of education, through regular independent inspection, public reporting and informed independent advice. One of Ofsted's principal tasks is the management of the system of school inspections, as defined originally by the Education (Schools) Act 1992. This provides for the regular inspection of more than 23,000 schools in England (including, over a six-year cycle, all maintained secondary schools) that are wholly or mainly state-funded. There are also regular inspections of local education authorities, carried out independently of schools inspections. In addition, in the context of secondary education, Ofsted reports on the impact of government initiatives, such as Education Action Zones and the Excellence in Cities programme.

Action is taken in respect of poorly performing schools

1.11 Since 1993 Ofsted has made schools that have been judged, using a range of criteria, as failing or likely to fail to give their pupils an acceptable standard of education subject to "special measures". Schools which, although giving their pupils, in general, an acceptable standard of education, have substantial shortcomings in one or more areas, are designated as schools with "serious weaknesses".

7 *"Schools achieving success", Department for Education and Skills, 2001, Cm 5320.*
8 *"A New Specialist System: Transforming Secondary Education", Department for Education and Skills, 2003.*

1.12 The governing body of a school made subject to special measures has 40 working days after receipt of the inspection report in which to submit its action plan to the Department and Ofsted. Then the Local Education Authority must submit within 10 working days its commentary on the school's action plan and its own statement of action. The action plans should include a timetable to allow the school to be removed from special measures as soon as possible, but no later than two years after the school has been made subject to special measures. Ministers expect schools that have not been removed from special measures within two years to be closed.

1.13 The number of secondary schools subject to special measures stood at 58 at the end of August 2003. In 2001-02, 26 schools subject to measures had improved sufficiently to be removed from special measures and 12 were closed. There is no distinct geographical pattern for the location of schools that have been placed in special measures, but the majority are in relatively deprived urban areas.

1.14 Schools designated as having serious weaknesses are also required to produce an action plan, which should include a timetable designed to remove the causes of the serious weaknesses within one year of receiving the inspection report. Schools with serious weaknesses are inspected about two years after their first designation. If a school has not made sufficient progress within that time, it is likely to be made subject to special measures. As at the end of August 2003 there were 63 secondary schools designated as having serious weaknesses.

Improved measures of school performance are being developed

1.15 Since the Education Act 1992, the Department has published annually performance tables for maintained secondary schools in England, showing summary results of, and trends in, the performance of pupils in GCSE and A level examinations for each school. In more recent years, tables for Key Stage 3 performance in national curriculum tests have also been published. The information in these tables is of only limited value in comparing the performance of different schools and different types of school. This is because they take no account of factors external to a school, some of which can have a significant influence on the academic achievements of pupils. These include the prior academic achievements of pupils in earlier stages of their education, in particular, but also the differing characteristics and backgrounds of a school's pupils. For similar reasons, performance tables of academic achievement are of only limited use in assessing a school's performance from one year to another.

1.16 In recent years, the quality of data on individual pupil characteristics collected by the Department has improved markedly, and it is now possible to adjust the information on current academic achievement to take account of pupil prior academic achievement and some of the other external factors that can influence the performance of a school's pupils **(Box 3)**. This more sophisticated analysis provides a sounder basis for comparing the performance of schools - with each other and over time - in terms of the difference they make to the academic achievements of pupils.

BOX 3

Individual pupil and school characteristics held centrally by the Department

Pupil characteristics

- Prior academic achievement
- Gender
- Age
- Eligibility for free school meals
- Ethnicity
- English as an additional language
- Stability - whether at same school for the entire Key Stage
- Special educational needs

School-level characteristics

- Percentage of pupils eligible for free school meals
- Percentage of pupils with English as an additional language
- Percentage pupil stability
- Percentage of pupils with special educational needs

1.17 The 2002 performance tables published by the Department in January 2003 included, for the first time, measures of the progress made by pupils between Key Stage 2 and Key Stage 3 and between Key Stage 3 and GCSE level, relative to the national average for pupils of equivalent prior achievement. Although these measures took account of pupils' prior academic achievements, they did not take into account other significant external influences on performance, particularly those related to the economic, social and cultural backgrounds of a school's pupils. The Department decided not to adjust academic performance for external factors other than prior achievement, on the grounds that it is seeking to achieve the same educational outcomes for all pupils with a given level of prior achievement, whatever their background.

Study scope and methodology

1.18 We examined:

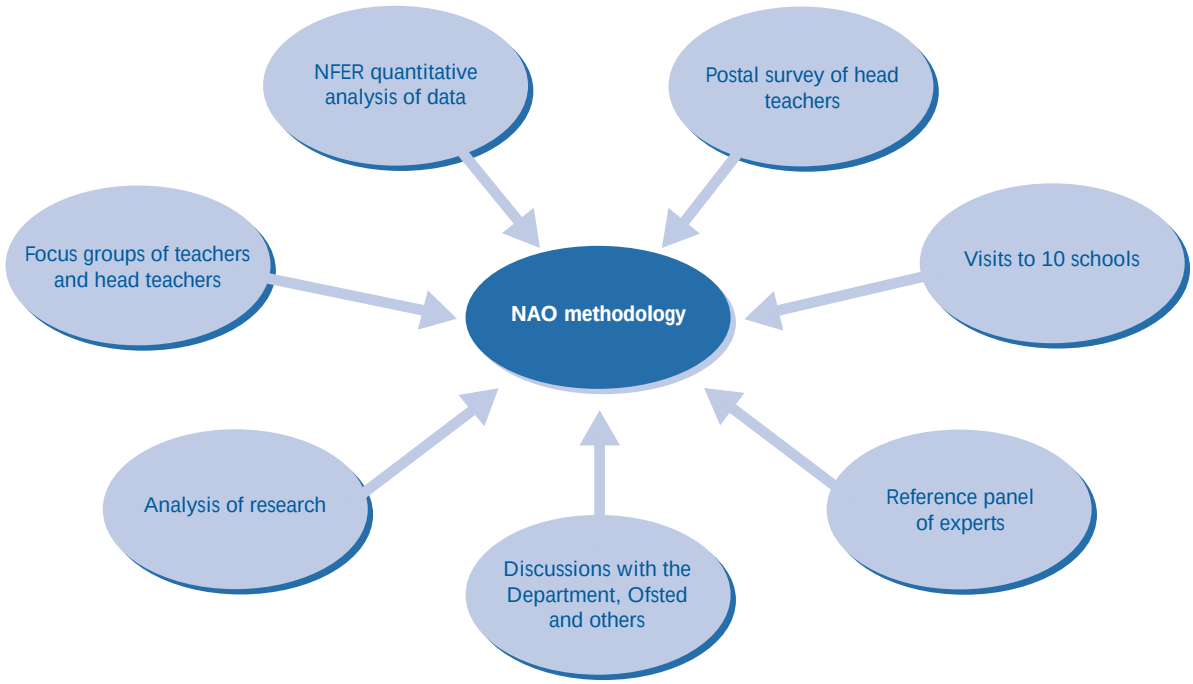
- the difference schools make to the academic achievements of pupils, once the influences of prior academic achievement and other external factors have been taken into account (Part 2); and
- the key characteristics of schools that provide their pupils with a good quality education (Part 3).

1.19 We focused on the performance of pupils aged 11 to 16, up to GCSE level, attending maintained secondary schools in England. Academic and vocational A levels are delivered by a different range of institutions, including some maintained secondary schools. Although the presence of a sixth form may impact on a school's effectiveness for younger pupils, the effect is not covered in our report.

1.20 Our analysis is of the average performance of pupils in each school - we did not analyse the variations between the performances of pupils within the same school. Further, because good quality data on pupil characteristics has only recently become available, we were unable to track changes in the performance of individual secondary schools over time.

1.21 **Figure 5** illustrates the elements of our methodology, and Appendix 2 on pages 37 and 38 provides a full description. Our analysis in Part 2 of the report draws upon quantitative analysis that we commissioned from the National Foundation for Educational Research (NFER). The NFER is an independent and respected organisation that has been specialising in educational research and development for more than 50 years, and whose clients have included the Department and Ofsted. An outline of the data and methodology for the quantitative analysis, and the detailed results, are set out in Appendix 3 on pages 39 to 44. The NFER's full report can be found on www.nfer.ac.uk.

5 Elements of the study methodology



Source: National Audit Office

Part 2

Assessing the difference schools make

Introduction

2.1 Part one of the report explained that data were becoming available to enable the academic achievements of a school's pupils to be adjusted for the characteristics of individual pupils and schools, so that the performance of schools, in terms of the difference they make to the academic achievements of pupils, can be compared on a like-by-like basis.

2.2 This part of the report considers the results of analyses carried out on our behalf by the NFER. We asked the NFER to assess the variations in the performance of schools, by adjusting the academic achievements of pupils in 2002 for prior pupil achievement and other external influences on performance. This involved the analysis of data for more than one million pupils in more than 3,100 maintained secondary schools in England, with the main aim of identifying variations in the extent to which the education provided by different schools, and different types of school, has an impact on pupil performance.

2.3 Working to our specification, the NFER's analysis of the influence on academic achievement of external factors was limited to those factors recorded in respect of all pupils and schools on databases maintained by the Department (Box 3). The analysis included, for example, pupil age, gender, ethnicity and eligibility for free school meals, but not school funding, the age and condition of school buildings, and parental occupation and education levels, which might also influence academic achievement. Therefore, the analysis was not able to provide a fully comprehensive measure of the difference schools make to academic achievement.

2.4 Insufficient data of good quality was available to assess the performance of secondary schools by tracking the progress of pupils who sat their GCSE examinations in 2002 back to their performance at the end of Key Stage 2 in 1997, prior to their starting their secondary school education. More and better quality data should be available in future to enable this to be done for pupils who sat their GCSE examinations in 2003. We commissioned separate analyses, therefore, of the progress made by pupils:

- from Key Stage 2 in 1999 to Key Stage 3 in 2002; and
- from Key Stage 3 in 2000 to GCSE in 2002.

2.5 In recent years, there has been a substantial amount of research and analysis of performance data relating to secondary schools. However, the analysis carried out by the NFER used sophisticated multi-level modelling techniques and is based on improved data about individual pupils. The results, which also include estimates for uncertainty, can therefore be considered to be particularly robust, and have been reviewed by our reference panel of experts. Further details of the methodology used by the NFER and some of the results of the analysis are set out in Appendix 3 on pages 39 to 44.

2.6 The analysis considered the effect on school performance of adjusting the current academic achievements of pupils for prior pupil achievement and other external influences. We examined:

- variations between the performance of different secondary schools;
- variations between the performance of different types of secondary school;
- the strength of the relationship between Ofsted's assessments of the quality of education provided by schools and our performance measures of the difference schools make to the academic achievements of pupils; and
- the extent to which different external factors influenced academic achievement.

2.7 We also examined the influence of Departmental targets on the performance of secondary schools.

Variations in school performance

Variations between the performance of different schools were substantially reduced when external factors were taken into consideration

2.8 The variations between schools, in terms of the academic achievements of pupils at both Key Stage 3 and GCSE level, were quite substantial (Appendix 3, Figures 14 and 16). Pupils at the highest achieving schools who sat their GCSE examinations in 2002 achieved, on average, around 20 grades more than the average for pupils in all maintained schools **(Figure 6)**. However, once adjustments were made for the influence of external factors, the range of variation that might be attributed to the performance of schools, in terms of the difference they made to academic achievement, was substantially less (Appendix 3, Figures 15 and 17). Pupils at schools that appeared to be providing the highest standard of education achieved, on average, five grades more than schools providing an average standard of education - the difference, for example, between a pupil achieving 5 Grade As or 5 Grade Bs.

6 Illustration of a difference of 20 grades at GCSE level

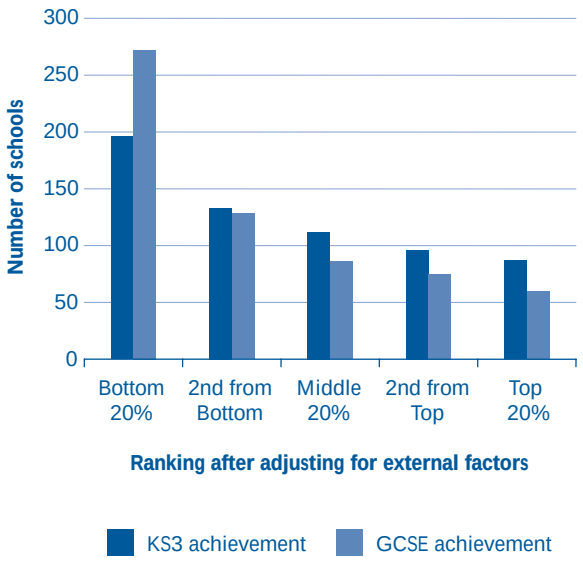
Subject	Pupil X's grades	Pupil Y's grades
1	A*	B
2	A*	B
3	A	B
4	A	C
5	B	C
6	B	E
7	B	F
8	B	G

A measure that takes account of external influences is a better measure of school performance than the unadjusted academic achievements of pupils

2.9 The impact on academic performance of adjusting for external factors will vary between pupils and between schools, depending on the extent to which each pupil or school is affected by the external factors. As a result, there are schools that provide a relatively good education for pupils who perform, on average, relatively poorly in terms of their academic achievements. Conversely, there are schools with good academic records that provide a relatively poor standard of education.

2.10 Judgements on a school's contribution to the academic achievements of its pupils can differ significantly, therefore, depending on whether or not the academic achievements are adjusted for the influence of external factors. For example, of the 624 schools ranked in the bottom 20 per cent of performers, in terms of academic achievement in Key Stage 3 tests in 2002, just 196 were ranked in the bottom 20 per cent when academic achievement was adjusted for the influence of external factors, with 87 ranked in the top 20 per cent. Similarly, of the 621 schools ranked in the bottom 20 per cent of performers, in terms of academic achievement at GCSE level in 2002, just 272 were ranked in the bottom 20 per cent after adjustment for the influence of external factors, with 60 schools ranked in the top 20 per cent, **(Figure 7)**.

7 Ranking of the schools that were in the bottom 20 per cent of performers in terms of academic achievement in 2002, after adjusting for external factors



Source: The National Foundation for Educational Research

Variations between the average performance of secondary schools in different local education authorities reduce when external factors are taken into account

2.11 The variations in the average performance of schools between different local education authorities reduced substantially when the academic achievements of pupils were adjusted for the influence of external factors. Also, as for individual schools, allowing for external factors can make a substantial difference to how authorities compare with one another. For example, out of the 150 local education authorities in England, five inner London authorities ranked substantially higher when the academic achievements of pupils in their schools were adjusted for the influence of external factors **(Figure 8)**.

8 A comparison of how five Inner London local education authorities ranked, based on the academic achievements of secondary school pupils and when academic achievements were adjusted for external factors

	Key Stage 3 ranking		GCSE ranking	
Education authority	Academic achievement	Adjusted for external factors	Academic achievement	Adjusted for external factors
Hackney	143rd	55th	128th	42nd
Haringey	135th	12th	137th	105th
Islington	133rd	9th	138th	51st
Lambeth	127th	30th	114th	16th
Southwark	146th	40th	139th	31st

Source: The National Foundation for Educational Research

2.12 A significant external influence on secondary school performance is the level of pupil prior academic achievement at Key Stage 2, which is influenced partly by local education authorities in terms of the quality of education provided by primary schools. Therefore, to appraise the overall performance of local education authorities, these adjusted rankings should be considered alongside measures of performance in primary education.

Variations between different types of school

There are small variations in the performance of different types of school when external factors are taken into account

2.13 Our analysis included the type of school, as well as the other external variables for which information was available, to determine whether the difference schools made to the academic achievements of pupils varied according to type. The types of school are not mutually exclusive, as a school could be, for example, a specialist, single-sex, faith school. The analysis shows the average difference in the performance of each school type, allowing for these overlaps and the other external influences on performance.

2.14 The analysis suggests that on average there were statistically significant differences between the performance of each different type of school (in terms of the difference they make to the academic achievements of pupils), at either Key Stage 3 or GCSE level, or both, when compared with all other schools. In most cases the differences in educational terms were small, but in all cases, other than selective schools at GCSE level and schools in Education Action Zones, the average performance of each type of school was better than the average for all other schools, on the basis of the other factors included in the analysis **(Figure 9)**.

2.15 The small average differences between different types of school mask larger differences between schools of the same type. When compared with all other schools, there are, for example, specialist schools with a low performance ranking as well as specialist schools that rank highly. Also, our findings do not explain why the different types of school perform on average better or worse than other schools. However, they do suggest that when compared with other types of school, the average specialist school, for example, has certain characteristics associated with good performance.

Selective schools

2.16 Our analysis suggests that on average, across their range of pupils, the 164 selective schools in England made a bigger difference to the academic achievements of pupils than the average for other schools at Key Stage 3, but a smaller difference at GCSE level. The difference made by selective schools at both key Stage 3 and GCSE level appear to be of particular benefit to pupils who have a relatively low level of prior academic achievement. We also examined whether the presence of selective schools in a local education authority had an impact on the performance of other schools in the authority, but our analysis showed no significant effect.

Specialist schools

2.17 Our analysis indicates that the 685 specialist schools in England in 2001-02 performed, on average, slightly better than other schools, regardless of the specialist subject. Other research has also suggested that pupils in specialist schools make relatively good progress. For example, research published in 2003 found that since 1994, when specialist schools were first introduced, the GCSE level performance of pupils attending specialist schools improved by more than that achieved by pupils attending non-specialist comprehensive schools[9].

9 *"Educational outcomes and value added by specialist schools - 2002 analysis", Professor D Jesson for the Specialist Schools Trust, 2003.*

9 The performance of different types of school, compared with all other schools, when external factors are taken into account

Figure 9 shows, for example, that selective schools made an above average difference to the academic achievements of pupils at Key Stage 3, and a below average difference at GCSE level.

School type	Average difference Key Stage 3[1]	Average difference GCSE[2]
Selective (grammar)	**1.94**	**-1.04**
Impact of selection on other schools in local education authority	-[3]	-
Specialist[4]	**0.18**	**0.84**
Arts (compared with technology)	-	-
Language (compared with technology)	-	-
Sports (compared with technology)	-	-
Faith[4]	**0.18**	-
Roman Catholic (compared with Church of England)	-	-
Other Christian (compared with Church of England)	*0.55*	-
Jewish (compared with Church of England)	-	*3.75*
Other Faith (compared with Church of England)	*2.19*	*6.87*
Beacon	**0.37**	**0.79**
Single sex		
Boys' schools	**0.36**	-
Girls' schools	**0.58**	-
Schools in Education Action Zones	**-**	**-0.36**

NOTES

1. At Key Stage 3, an average difference of 6.00 means the difference, for example, between a level 3 and a level 4 in one subject for all pupils.
2. At GCSE level, an average difference of 1.00 means the difference, for example, of one grade (such as between a grade B and a grade C) in one subject for all pupils.
3. No entry in the table means that there is no significant difference.
4. We compared specialist schools with all other schools. We then compared other types of specialist school with specialist technology schools and found no significant difference. Similarly, we compared faith schools with all other schools. We then compared other types of faith school with Church of England schools and found either no significant difference or a positive effect.

Source: The National Foundation for Educational Research

Faith schools

2.18 On average, the almost 600 schools with a religious character performed better at Key Stage 3 than non-faith schools, with "other Christian" schools (21 schools) and "other faith" schools (three schools) doing particularly well. At GCSE level, only Jewish schools (four schools) and "other faith" schools performed significantly better than non-faith schools. As with other types of school, there were wide variations between the performances of different faith schools of the same type (such that there were Roman Catholic schools that performed relatively well and others that performed relatively poorly). The data was unavailable centrally to enable us to analyse the extent to which each faith school's faith was built into its culture and ethos. However, other research suggests that many faith schools, and the communities from which they draw their pupils, have a clear ethos and values that might lead to better than average performance overall[10].

Beacon schools

2.19 The finding that the Beacon secondary schools made a bigger difference to the academic achievements of pupils than the average for all other schools should be expected, given that they were selected for beacon status on the grounds that they were considered to be among the best performing schools in the country. Although the primary aim of Beacon schools is to share best practice with and drive innovation in other schools, some of the difference may be attributable to the positive impact of the Beacon status itself in promoting teaching and learning within Beacon schools.

10 *"The impact of specialist and faith schools", National Foundation for Educational Research, February 2002.*

Single sex schools

2.20 There has been a substantial amount of research to suggest that, on average, girls perform better than boys in mixed gender schools. Our analysis supports this and shows that, although the differences in many schools were small, there was an overall national tendency for girls to perform better than boys, at both Key Stage 3 and GCSE level, once external factors have been taken into account. However, our analysis also shows that single sex schools (both boys-only and girls-only schools) on average made a bigger difference to the academic achievements of pupils than mixed schools. The differences varied between subjects, with the advantages of single sex schools at Key Stage 3 most marked for English but not particularly so for Mathematics. Other research suggests that single sex schools are of particular benefit to pupils with relatively low levels of prior academic achievement.

Schools in Education Action Zones

2.21 Schools located in Education Action Zones were the only type of school included in our analysis that, on average, made a smaller overall difference to the academic achievements of pupils than the average for all schools. Although there was no significant difference at Key Stage 3, they performed slightly worse at GCSE level. The Department suggested that the results for Education Action Zones may reflect the zones' focus on primary schools in the first three years of their existence. We did not include Excellence in Cities schools in our analysis as this is a relatively recent development, the full impact of which may take some time be experienced.

2.22 Other research, undertaken on behalf of the Department, has suggested that although pupils attending schools in Education Action Zones and Excellence in Cities areas make relatively less progress than pupils attending other schools, the initiatives were having a positive impact for pupils with low levels of prior academic achievement, and for pupils attending schools where a high proportion are eligible for free school meals[11]. In addition, research by Ofsted suggests that the gap in academic achievement between pupils attending schools in Excellence in Cities areas and pupils in other schools is progressively narrowing, particularly at Key Stage 3. Ofsted also found that exclusions were falling and attendance was improving at faster rates in schools in Education Action Zones and Excellence in Cities areas than nationally[12].

Ofsted assessments of the quality of education provided by schools

Ofsted assessments of schools were more closely related to the unadjusted academic achievements of pupils than to academic achievements adjusted for the influence of external factors

2.23 As part of its role in improving the quality of secondary education, Ofsted aims to inspect all secondary schools within a six year cycle, although the frequency and depth of inspection are tailored to the performance and circumstances of each school. For each school, the inspection team produces a report assessing and commenting on a wide range of school characteristics.

2.24 We considered how closely the judgements made by Ofsted inspectors were related to measures of school performance. To do this, for Key Stage 3 and GCSE separately, we selected eight factors we considered to have strong links with the quality of education provided by schools **(Box 4)**, and compared Ofsted's judgements on them with the schools' academic achievements, before and after taking into account the influence on performance of external factors. Because the school performance measures relate to education provided during the period 1999 to 2002, we restricted the analysis to include only those schools that Ofsted had inspected since January 2000.

2.25 The analysis showed that for each of the eight judgements made by Ofsted inspectors, there was a stronger relationship with the unadjusted academic achievements of a school's pupils than with achievement adjusted for the influence of external factors. When considered together, the only Ofsted judgements that had a significant relationship with academic achievement adjusted for the influence of external factors were those that measured behaviour and the quality of teaching.

2.26 Decisions to place a school in special measures might also be influenced more by the unadjusted academic achievements of pupils rather than achievement adjusted for the influence of external factors. Of the 72 schools that were in special measures at some stage during 2001-02, 78 per cent were ranked more highly at Key Stage 3, and 65 per cent were ranked more highly at GCSE level, after measures of academic achievement had been adjusted to take account of the influence of external factors.

11 *"Evaluation of Excellence in Cities: Overview of Interim Findings", National Foundation for Educational Research, London School of Economics and Institute of Fiscal Studies, 2002.*

12 *"Excellence in Cities and Education Action Zones: management and impact", Ofsted, 2003, HMI 1399.*

BOX 4

Ofsted inspectors make judgements, on a scale from one to seven, on a range of factors, including those we considered to have strong links with the quality of education provided:

- Teaching for the school overall
- Teaching at the relevant Key Stage
- Acquisition of skills, knowledge and understanding for the school overall
- Acquisition of skills, knowledge and understanding at the relevant Key Stage
- Behaviour, including incidence of exclusions
- Attendance
- Leadership and management of the head teacher and staff
- Monitoring and evaluation of the school's performance and taking effective action

2.27 The quality of information on individual pupil and school characteristics held centrally by the Department has improved markedly in recent years. In the light of this, Ofsted has the opportunity to use this information to inform and refine further its risk-based approach to inspections.

The impact of external factors on academic achievement

2.28 The impact on academic performance of adjusting for external factors depends on the influence of each factor. We therefore analysed the influence of each external factor when all other factors are taken into account.

Prior academic achievement and the percentage of pupils eligible for free school meals had the largest influence on academic performance

2.29 Prior academic achievement was the largest single factor that influenced the academic achievements of pupils at secondary school, at both Key Stage 3 and GCSE level. Eligibility for free school meals, which is used as a very broad proxy for the economic position of a pupil's family, was also quite a strong indicator. However, although it should be a simple indicator to measure and there is a strong relationship between eligibility for free school meals and academic achievement, as the only measure of economic and social deprivation used it has substantial limitations. In particular:

- because it is a measure of pupils known to be eligible for free school meals, schools might have different levels of awareness of the eligibility of their pupils;
- it is an absolute measure (pupils are either entitled or they are not) and does not assess relative economic well-being or deprivation; and
- it is a measure only of economic well-being or deprivation, and does not capture other social and environmental factors that might also have a strong influence on performance.

2.30 Our visits to secondary schools confirmed that eligibility for free schools meals was only a very arbitrary indicator of the economic and social influences on a school's pupils. For example, we visited one school that had a relatively low number of pupils eligible for free school meals, suggesting that economic deprivation was not a major issue, yet the pupils lived in an environment that had severe social problems, including a gang culture, that might be expected to have a negative impact on the academic achievements of the school's pupils. Statistical analyses that use eligibility for free school meals as the only indicator of deprivation would not take these other social factors into account.

Pupils from ethnic minority groups made slightly better progress than white British pupils

2.31 Research has indicated that some ethnic minority groups achieve substantially less, in terms of academic achievement, than white British pupils[13]. Our analysis shows that although some ethnic minority groups (Black Caribbean, Black Other, Pakistani and pupils whose ethnicity is unknown) appeared to make less academic progress than white British pupils during Key Stage 3, all ethnic minority groups (other than pupils whose ethnicity is unknown) made better progress than their white British counterparts at GCSE level and overall when external factors were taken into account. This suggests that the difference between the academic achievements of white British pupils and these ethnic minority groups may be influenced by factors outside the control of secondary schools. For example, on average minority ethnic groups may have significantly lower levels of prior achievement and live in areas of high economic and social deprivation.

Other external factors had a statistically significant, but small, effect

2.32 Other factors included in the model also appeared to have a significant, though relatively small, association with academic achievement. These included:

- girls making more progress overall than boys;
- younger pupils on average making slightly more progress than older pupils; and
- pupils with special educational needs tending to make less progress.

Influence of Departmental targets

2.33 Departmental targets can influence the priority schools give to different pupils. In particular, as a result of national targets some of the schools we visited focused additional teaching resources on pupils they considered to be on the borderline, in terms of whether or not their academic performance would contribute towards the achievement of the targets. For example, in the context of the key target for the proportion of pupils achieving five or more grades A* to C at GCSE level, a number of schools committed extra resources, often in the form of additional lessons and individual support, to pupils who were close to the borderline between the grades C and D. However, in addition to indicators of performance against the Department's threshold targets, the Department's performance tables also include an indicator that shows the average academic achievements for all a school's pupils at both Key Stage 3 and GCSE level.

13 *"Minority Ethnic Attainment and Participation in Education and Training: The Evidence", Department for Education and Skills, 2003.*

Part 3

Providing a good quality education

Introduction

3.1 In Part 2 we showed that the academic achievements of a school's pupils are influenced by many factors outside the control of the school. However, schools do make a difference and there are variations in the quality of education provided by different schools. In this part of the report we consider the management and teaching practices, and other factors deemed to be largely within the control of individual schools, that are associated with high quality education.

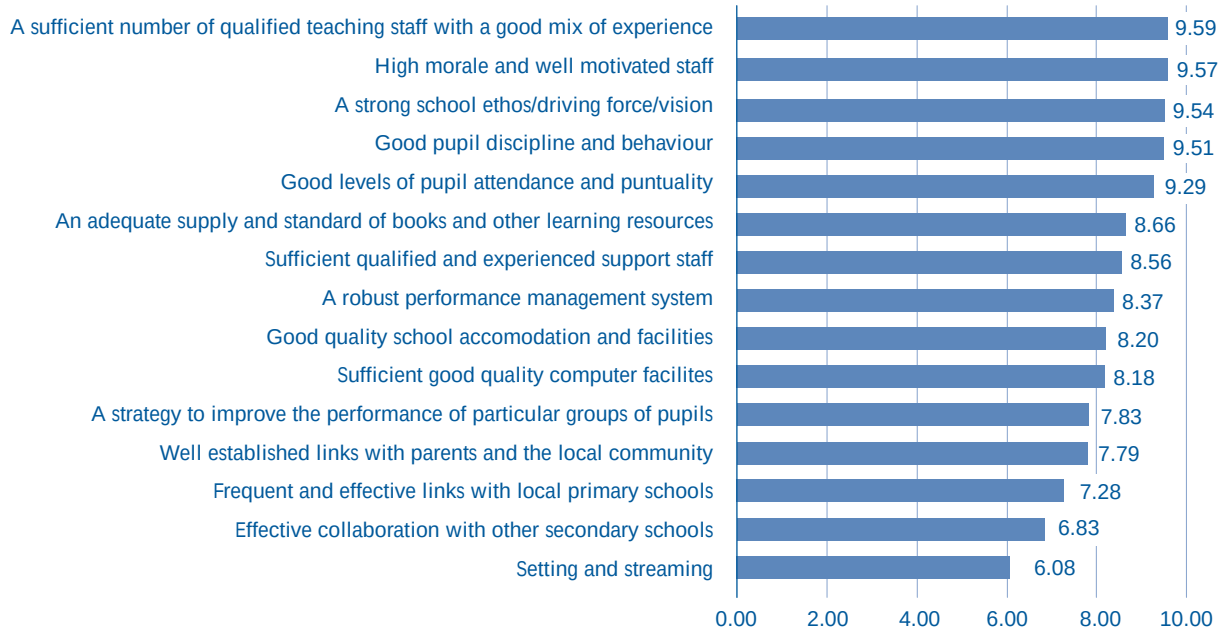
3.2 Potentially, there are a large number of management, teaching and other local practices that influence a school's performance, although some might be peculiar to a particular school's circumstances and not easily transferable. Therefore, we focused on the more generic practices for which there is some consensus about their relevance to academic achievement.

3.3 In identifying the factors that influence the quality of education, we:

- drew on the extensive amount of literature on school effectiveness and improvement that has been published in recent years;
- examined Ofsted annual and special reports, as well as a sample of reports from recently completed Ofsted inspections;
- ran four focus groups of secondary school teachers and head teachers;
- sent a questionnaire survey to head teachers asking them to rate influences on academic achievement **(Figure 10)**; and
- visited 10 secondary schools that appeared from our analysis to provide a significantly better or significantly worse than average quality of education.

10 Head teachers' rating of influences on academic achievement

We asked head teachers to rate the importance of 15 factors that influence the academic achievement of a school's pupils, on a scale of one to ten. We selected the 15 factors based on the results of our analysis of research and of focus groups held with teachers and head teachers. The figure shows the average score that head teachers responding to the survey allotted to each of the factors.

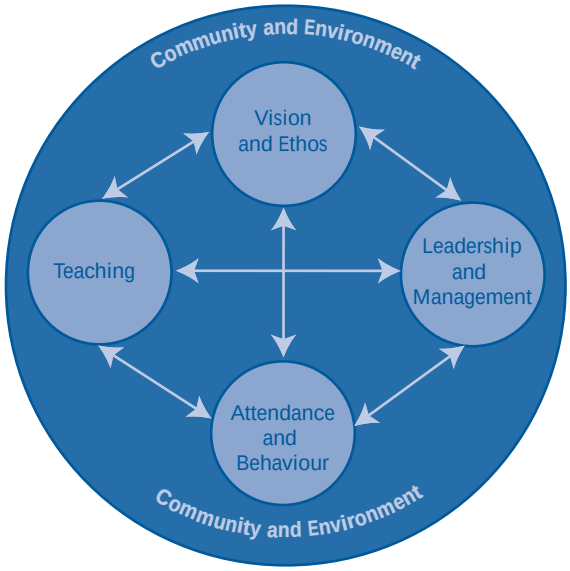


Source: National Audit Office; a postal survey of 389 secondary school head teachers, to which 219 (56 per cent) responded

3.4 In Figure 10 we provide the rating by head teachers of the relative importance of 15 influences on academic achievement. We then considered these influences under four broad characteristics of an effective school: vision and ethos, leadership and management, teaching, and pupil attendance and behaviour. In addition, a school operates within its own cultural, economic and social environment, and the quality of education provided is also influenced by the way in which a school interacts with parents and the local community. We therefore also considered these interactions.

3.5 **Figure 11** depicts the strong links between these characteristics. For example, a school with effective leadership should be capable of developing good teaching. When teaching is effective, pupils tend to be better behaved and less disruptive, which, in turn, should make it easier for teachers to teach. And a school with a clear, school-wide vision should see it permeate through leadership and teaching to pupil behaviour.

11 There are strong links between the characteristices that influence the quality of education that schools provide



3.6 Our assessment of the inherent risks and potential benefits associated with each of the characteristics is set out in **Figure 12**. We outline our further examination in the following paragraphs.

Vision and ethos

3.7 Research suggests that many high performing schools have developed their own distinct identity. They have a positive, definable and recognisable ethos that permeates the entire school, and is evident in good pupil-teacher relations, shared vision, co-operative working and common goals[14]. The Department is encouraging all schools to develop their own distinctive mission and ethos, for example through the Specialist Schools Programme[15], and during inspections Ofsted addresses school ethos by examining the role of leadership in creating and securing commitment to a clear vision[16].

3.8 Our survey of head teachers confirmed vision and ethos as key factors linked to academic performance (figure 10). During our visits to schools, head teachers raised issues around expectations, aspiration and self-esteem, all of which are components of an effective school ethos.

3.9 A range of information collected during the visits suggested that an effective school ethos is derived from a shared understanding between management, staff, pupils, parents and governors, and incorporates recognition of, and links with, the wider community. There was also evidence of a close relationship between ethos and school leadership, in that the head teacher plays a key role in shaping and promoting a school's ethos. Staff at some schools that had experienced difficulties in the past often referred to the previous absence of a positive ethos or vision, or the presence of a blame culture.

3.10 The ethos of a school might, in part, be derived from the type of school it is. For example, in a faith school or a specialist school it may be linked to the faith or specialty. Each school's ethos will be unique to its own particular circumstances, though we identified some common features of an effective ethos, including a focus on pupils, teachers and learning, and high aspirations for both pupils and staff.

Leadership and management

3.11 The importance of effective school leadership and management to delivering high quality education is widely recognised[17]. For example, both the Education and Skills Select Committee[18] and the Institute of Education have suggested that a visionary head teacher who can empower staff, parents and pupils to bring about positive change is essential for school improvement[19].

14 *"High Performing Specialist Schools: What Makes the Difference", National Foundation for Educational Research, 2002.*
15 *"Schools: Building on success", Department for Education and Skills, 2001, Cm 5050.*
16 *"Handbook for Inspecting Secondary Schools", Ofsted.*
17 *"Improving City Schools", Ofsted, 2000.*
18 *"Secondary Education: Diversity of Provision", House of Commons Education and Skills Committee, Fourth Report of Session 2002-03.*
19 *"The Culture of Change: Comparative Case Studies of Improving Schools in Singapore and London", Institute of Education, 2000.*

12 Inherent risks and potential benefits associated with the characteristics of the quality of education provided by schools

Characteristic	Inherent risks	Potential benefits
Vision and ethos	**The absence of a clear and positive vision and ethos can:**	**A clear and positive vision and ethos can:**
	■ suggest a lack of purpose, drive and direction; ■ create divisions among staff and lead to a blame culture; ■ make a school unattractive to potential pupils, parents and staff.	■ provide a school with a focus, direction and an identity related to its particular circumstances; ■ attract quality staff and promote community support; ■ raise pupil and staff expectations, aspirations and self-esteem.
Leadership and management	**The lack of effective leadership and management can:**	**High quality leadership and effective management can:**
	■ dampen staff morale and motivation and create disunity; ■ lead to apathy and disillusionment; ■ result in inconsistent standards within the schools and a lack of responsibility and accountability.	■ give a school focus and direction; ■ inspire and raise staff morale and motivation; ■ facilitate effective performance monitoring; ■ empower staff, parents and pupils to change and improve.
Teaching	**Inadequate teaching can:**	**High quality teaching can:**
	■ reduce learning opportunities and lead to poor academic achievement; ■ result in pupil boredom and disinterest and lead to poor attendance and behaviour.	■ directly improve academic achievement; ■ encourage independent learning; ■ maintain the interest and enthusiasm of pupils; ■ improve attendance.
Pupil attendance and behaviour	**Poor standards of attendance and behaviour can:**	**High standards of attendance and behaviour can:**
	■ reduce the impact of teaching and learning; ■ disrupt teaching and thereby impact on well-behaved pupils; ■ divert teaching resources and add to the administration burden; ■ reduce staff motivation and morale.	■ reflect pupil interest and enthusiasm; ■ foster a positive teaching and learning environment; ■ enable teaching and learning to be planned properly.
Interaction with the local community	**Poor relations with the local community can:**	**Good relations with the local community can:**
	■ isolate the school within the community; ■ lead to loss of pupil pride in schooling and education; ■ downgrade the value of education within the community.	■ raise the profile and value of education within the community; ■ encourage parental and community support for children's education; ■ increase pupils' self-esteem; ■ optimise use of school facilities.

3.12 In the schools we visited that were performing well or improving, the leadership role was shared between the head teacher and members of the senior management team, with each having clearly defined responsibilities. Other key characteristics of effective leadership were consistency, fairness, openness, approachability, and cohesion within the leadership team. In schools that had been experiencing difficulties, staff often referred to a lack of effective leadership.

3.13 Head teachers in the schools we visited frequently referred to the quality of middle management - heads of year and department[20] - as having an important influence on their school's performance. As key members of staff in developing classroom teaching, heads of department were especially important in raising academic achievement.

3.14 Ofsted has also suggested that departments working to a common framework and exemplary leadership by heads of department are key components of effective departments[21]. Ofsted considers that effective middle managers[22]:

- make sure that the teachers in their teams play a full part in the management of the subject by delegating tasks to them;
- have the ability to sustain their own motivation and that of other staff;
- ensure that the development and implementation of subject policies and practices reflect those of the school, and that development planning sets appropriate expectations in relation to pupils' achievement and the quality of teaching;
- analyse achievement data to identify and help underachieving pupils; and
- have effective approaches to assessing, recording and reporting on pupils' achievements.

3.15 The standards and styles of leadership and management at the schools we visited varied, but a number of schools had designed specific arrangements to improve their management and the way they communicated with staff **(example in Box 5)**.

Management through setting targets and monitoring pupil performance

3.16 Monitoring pupil development and performance is an important management function, and provides the foundation for developing teaching and learning in ways that reflect pupils' needs. Head teachers responding to our survey rated a robust performance management system more than eight out of ten in terms of importance (Figure 10).

3.17 Ofsted also recognises the importance of productive pupil assessment in developing effective departments[23]. Ofsted's annual report for 2001-02 considered that procedures for monitoring pupils' academic performance are effective where:

- schools have strong baseline information and subsequent achievement data are recorded and thoroughly analysed;
- form tutors are central to the academic monitoring process, which is closely overseen by senior staff;
- information is shared with pupils, and parents are able to monitor their child's progress regularly; and
- reward systems for achievement and effort are efficient and valued.

BOX 5

Development of links between management and staff

Newcastle Community High School and Garth Hill College each used 'link teachers', whose role was to ensure good communications between the school's senior management team and its staff.

Link teachers attended meetings of the senior management team, enabling them to provide two-way feedback between the senior management team and the school's staff. At Newcastle, the role of link teacher was given to one individual. At Garth Hill, the role was passed between staff to allow different teachers a development opportunity - as part of a policy of distributed leadership within the college.

20 Here we refer to a school's teaching department (for English, French, Mathematics, etc.), as opposed to the Department of Education and Skills.
21 "Good teaching, effective departments. Findings from a HMI survey of subject teaching in secondary schools", Ofsted, 2000, HMI 337.
22 "Annual Report of Her Majesty's Chief Inspector of Schools, Standards and Quality in Education 2001/02", Ofsted, 2003.
23 "Good teaching, effective departments. Findings from a HMI survey of subject teaching in secondary schools", Ofsted, 2000, HMI 337.

3.18 The schools we visited that were performing well or improving had all developed robust approaches to target setting and monitoring pupil progress. Many schools use tailor-made software to assist with this process, including some that predict future grades on the basis of current assessments of ability. A key feature of an effective pupil monitoring system is that all staff can understand, access and manipulate it.

Teaching

3.19 A considerable amount of research illustrates clear links between the quality of teaching and academic achievement. Our survey of head teachers, focus group discussions and school visits all confirmed that issues related to teachers and teaching are crucial to a school's performance. The Education and Skills Select Committee and Ofsted have also stressed the importance of good teaching[24]. Ofsted's inspections judged the quality of teaching to be very good or excellent in 13 per cent of secondary schools inspected in 2001-02, and good in a further 64 per cent of schools.

Teaching staff

3.20 Our survey of head teachers gave the highest rankings of all 15 important influences to having "a sufficient number of qualified teaching staff with a good mix of experience" and "high morale and well motivated staff" (figure 10). The more effective schools we visited had a full complement of teaching staff with a mix of older, experienced teachers and younger, or newly qualified, teachers. Within all the schools we visited, individual departments that were fully staffed by teachers considered to be of good quality consistently achieved better results than departments that had a high turnover of staff or long-term vacancies. In a number of cases the impact of teacher shortages on academic achievement was quite severe **(Box 6)**.

3.21 The Education and Skills Select Committee suggested that schools that find it difficult to attract and retain staff face a particular challenge in driving forward school improvement[25]. Many of the Department's initiatives are targeted at supporting schools facing challenging circumstances and all schools have access to recruitment and retention allowances to help them to recruit and retain staff in hard-to-fill posts.

3.22 Some schools we visited experienced particular difficulties in recruiting suitable staff, and had long-standing vacancies that they were unable to fill easily. These schools often had difficult or unattractive working or learning environments. The schools had tried a number of approaches to alleviate their staffing difficulties, with varying degrees of success. To cover short-term teacher absences, many schools use cover from within their school, with teachers often teaching out of subject.

3.23 Supply teachers tended to be used more often to cover longer term absences, such as maternity leave and where teaching posts were vacant. In 2001-02, Ofsted judged that 38 per cent of lessons taught by supply teachers to be good or better. This compared with 68 per cent of lessons taught by qualified teachers who had one or more years of teaching service at the school[26]. In the worst case we encountered, some classes taught by supply teachers were unruly, thereby making effective teaching difficult. However, some schools that needed to make substantial use of supply teachers took specific steps to minimise potential disruption by securing, as far as possible, a long term relationship with them **(Box 7)**.

BOX 6

The impact of shortages of teaching staff

The Westfield School English department experienced particularly acute staffing difficulties during 2001-02. A number of staff left the department and the school had only partial success replacing them. As a result, the department had to make substantial use of inexperienced, part-qualified and supply teachers.

The school's senior management team considered that these staffing difficulties had a direct impact on academic performance. Between 2001 and 2002, the percentage of pupils achieving a GCSE in English between grades A* and C fell from 49 per cent to 33 per cent, and the percentage achieving a grade between A* and G fell from 97 per cent to 83 per cent. Over the same period, the percentage of pupils achieving level five or higher in English at Key Stage 3 also fell, from 56 per cent to 37 per cent.

24 *"Secondary Education: Diversity of Provision", House of Commons Education and Skills Committee, Fourth Report of Session 2002-03; and "Good teaching, effective departments. Findings from a HMI survey of subject teaching in secondary schools", Ofsted, 2000, HMI 337.*
25 *"Secondary Education: Diversity of Provision", House of Commons Education and Skills Committee, Fourth Report of Session 2002-03.*
26 *"Annual Report of Her Majesty's Chief Inspector of Schools, Standards and Quality in Education 2001/02", Ofsted, 2003.*

BOX 7

Action to make effective use of supply teachers

All schools are likely to experience staff shortages at some time or other, if only because of staff sickness, and are therefore likely to make some use of supply teachers. To minimise the disruption caused by the need to use supply teachers, Westfield School and Priory School and Sports College try to:

- use agencies with which they have developed a good relationship;
- ensure that supply teachers remain in the school for long periods; and
- use former teachers from their school.

3.24 Nationally the number of short-term supply teachers in secondary schools is going down as teacher numbers increase and as schools review and reform their workforce. The Department has also introduced a quality mark for agencies and local education authorities that provide supply teachers, to recognise those that meet standards of good practice. The Department has also issued self-study materials to improve knowledge and skills, and published guidance for schools on how to make the best use of supply teachers.

Staff morale

3.25 Our survey of head teachers suggested that high morale and well motivated staff are very important to ensuring the provision of a high quality education (figure 10). Information collected during our school visits also indicated that high morale and motivation were associated with good quality leadership and management, with staff feeling valued, and a clear, school-wide ethos to which all staff subscribed.

Staff training and development

3.26 Schools need to spend time and resources on training and developing their staff. During our school visits we observed that well managed schools ensure that staff training is related to teachers' personal objectives, while also contributing to departmental and school development plans **(Box 8)**.

3.27 Monitoring staff performance, including observation of lessons, provides a sound base for staff development, and can be used to identify and disseminate good teaching practice. Ofsted has also stressed the importance of self evaluation and lesson observation, leading to action in developing effective departments[27]. Related good practices that we noted during our visits included communicating the lessons from external training more widely to staff who did not attend, staff working groups focused on development and improvement, and departmental staff observing and providing feedback on other departments' practices.

BOX 8

Planning and monitoring teacher training

Redbridge Community School records the training undertaken by each teacher to ensure that:

- the funding available for staff development is spread equitably between staff; and
- the benefits to individual teachers and the school are realised and can be evaluated.

27 *Good teaching, effective departments: Findings from a HMI survey of subject teaching in secondary schools", Ofsted, 2000, HMI 337.*

3.28 Good teaching practice can also be shared between schools, and some local education authorities have designated certain teachers as leaders in their subject, to be observed by teachers from other secondary schools. The Department's Specialist Schools and Advanced Skills Teachers programmes have also provided opportunities for schools to share good practice.

Learning

3.29 Well planned lessons with a clear structure and focus on outcomes are an important component of good teaching **(Box 9)**. Head teachers and teachers we spoke to during our visits valued the involvement of head teachers and members of the senior management team in the development of new teaching methods, and the use of learning mentors (non-teaching staff who work with pupils one-to-one or in small groups).

3.30 The availability of suitable learning resources aids pupil learning. Three of the 15 influences that our focus groups considered important to academic achievement related to the material resources of a school (figure 10). Schools we visited that had modern equipment frequently referred to its value, while those lacking basic resources, such as text books, considered that the shortfall was a barrier to improving performance. In particular, schools with interactive whiteboards and networked computers in classrooms saw theses resources as having a positive impact. Schools without networked computers in the classroom sometimes found it difficult to meet the curriculum requirements of certain subjects, particularly science. Support staff also play a significant role in supporting effective teaching and learning in schools.

Out of school hours study support

3.31 Study support covers a wide range of learning activities outside normal lesson time. Activities might include homework and study clubs, sport and outdoor activities, the creative arts, community volunteering, mentoring and opportunities to pursue particular interests, such as languages. Participation in study support, which is voluntary, is considered to be particularly beneficial for young people from disadvantaged areas who may be disaffected and underachieving.

The transition from primary school to secondary school

3.32 There is evidence that in recent years the transition from primary to secondary school can be handled poorly, resulting in an adverse effect on the progress made by some pupils during their early years in secondary education[28]. The Department has made additional funds available to aid the transition process, as part of the Key Stage 3 National Strategy. Specialist schools have also contributed to this work through their community development plans.

3.33 Many of the schools we visited were developing links with feeder primary schools in a number of ways. These included secondary school teachers taking lessons in primary schools and discussing the approaches used by primary school teachers, and primary school pupils visiting secondary schools and using their facilities. One approach, developed as part of literacy and numeracy schemes and the Key Stage 3 National Strategy, involves pupils starting a piece of work at the end of their time in primary school and finishing it on joining secondary school. Teachers considered that this approach provided pupils valuable continuity during a time that they can find traumatic.

BOX 9

Reminding teachers of the features of a good lesson

Redbridge Community School has produced a small laminated card, which sets out the school's learning strategies. These consist of a range of practical approaches to be used in lessons. Teachers keep the card on their desks as an aide-memoire.

28 *"Changing Schools: Evaluation of effectiveness of transfer arrangements at age 11", Ofsted, 2002, HMI 550.*

BOX 10

Easing the transition - The Opening Minds Project

Most Year 6 pupils in primary schools have one class teacher and one classroom. They are the senior pupils and have usually developed a level of responsibility in the school.

When these same pupils start Year 7 in secondary school their world changes dramatically. They move from one class teacher to different teachers for up to 10 subjects that are usually taught, for practical reasons of facilities, equipment etc, in different parts of the school. They spend their days on the move in a complex new environment, and are the juniors of their new school.

Some schools are now experimenting with a new curriculum for Year 7, based on the Royal Society of Arts "Opening Minds Project". This involves many subjects being taught in an integrated way, with one teacher teaching a Year 7 class for around one third of their timetable. St John's School and Community College, Marlborough piloted the scheme and found that the pupils taking part performed significantly better than the rest of the year group in English, mathematics and science. Behaviour in the pilot group was also found to be significantly better than that in the control group.

3.34 One recent pilot that appears to be having some success has involved a gradual transition during the first year at secondary school **(Box 10)**. The results indicate that further research may be worthwhile to determine whether the potential impact of the transition to secondary school on pupils' performance has been historically under-estimated, and whether measures to ease the transition should be more widely developed and applied.

Pupil attendance and behaviour

3.35 Head teachers responding to our survey ranked good pupil discipline and behaviour fourth of 15 important influences on academic achievement (figure 10). The extent to which a school experiences behaviour (and associated attendance) difficulties depends on a range of factors, including some linked to the economic, social and cultural environment from which a school's pupils are drawn. However, factors such as the school's vision and ethos, leadership and management and the quality of teaching also influence whether pupils want to attend school and behave well.

Attendance

3.36 The schools we visited that had experienced particular pupil attendance problems had developed various ways of dealing with them. Some had a policy of contacting parents as early as possible on the first day of non-attendance. And those schools that employed attendance or home-school liaison officers, who seek to build up a relationship between pupils, parents and staff, considered them valuable. Some schools used electronic registration to monitor attendance, punctuality and incidents of bad behaviour, and Garth Hill College used end-of-the-afternoon registration to help discourage truancy.

Behaviour

3.37 In Part 2 we noted that there was a clear relationship between academic progress and Ofsted's assessments of pupil behaviour. Most schools we visited emphasised the importance of inspiring and encouraging good behaviour. All had ways of recognising academic achievement, most sharing similar features. Many used incentives for pupils to attend school, arrive at lessons promptly, and behave well. Incentives and rewards can be based on individual and group achievements, and included ten-pin bowling vouchers, pens, certificates, raffle prizes, and visits to the cinema. In some cases, rewards for attendance or good behaviour gave pupils an opportunity for recognition they might not get on the basis of academic achievement. The most successful incentive and reward systems were those that were attractive to pupils and, therefore, influenced their behaviour.

3.38 The main strategies used for tackling poor behaviour included: pastoral support for pupils from head of year and senior management staff; picking up on small things in a consistent manner, such as pupils wearing training shoes instead of required footwear; and a clear understanding of the measures to be used to address particular types of behaviour. Schools may use different approaches **(examples at Box 11 and Box 12)**, but the key to effective discipline is a system that pupils and their parents understand and respect, and which involves all staff implementing it properly and consistently.

BOX 11

Behaviour Management

In September 2002 Garth Hill College introduced "Consistency Management and Co-operative Discipline", originally devised in the United States of America. Its main features are: prevention; caring; co-operation; organisation; and community.

The college identified 12 strategies to apply to its situation, including the introduction of pupils as classroom managers (who assist teachers in running the classroom), the use of lesson 'starters' to ensure that learning begins at the start of the lesson without disruption, and pupils using "Exit Ticket" books to reflect upon the day's learning.

In contrast to assertive discipline, a form of which had not been entirely successful due to a lack of resources and inconsistent application, the programme is based on shared responsibility in the classroom and the development of positive relationships and mutual respect. The college believes that the programme has already had a positive impact on pupil behaviour. The Department, which provided funding towards implementation, is monitoring the programme's effectiveness. The college considers it important that the programme is adapted to an individual school's requirements, and for it to cover the whole school.

BOX 12

Inclusion Units

Holly Hall Mathematics and Computing College set up an inclusion centre named 'the Zone'. Pupils at risk of exclusion are sent to study in a special room where staff can work with them on their 'emotional literacy' until they are ready to go back to normal classes at a later stage.

Priory School also set up an inclusion centre where pupils with a range of difficulties, including those at risk of exclusion, continue the work they would have been doing in class and are taught one-to-one or in small groups. By keeping up with class work pupils are able to transfer smoothly back into the class, without detriment to them or to other pupils. The school believes that this system has been effective in reducing exclusions and lesson disruption.

3.39 Ofsted has identified other factors that promote good and discourage bad behaviour,[29] including:

- staff monitoring corridors out of lesson times;
- training staff to manage poor behaviour and to ensure consistency of approach across the school;
- using learning support units to modify behaviour, reduce exclusions and re-integrate pupils returning from periods of exclusion; and
- using records of pupils' behaviour to set targets and to discuss progress with parents.

Links with parents and the local community

3.40 Research has demonstrated a strong link between the academic achievements of pupils and parental aspirations and support for their children's education, and that a lack of parental interest is a major contributor to underachievement. The interaction between a school, parents and the wider community is therefore important. There is a particular need for schools in areas of high social deprivation, where the barriers to academic achievement are relatively high, to reach out to parents and the community[30].

29 *"Annual Report of Her Majesty's Chief Inspector of Schools, Standards and Quality in Education 2001/02", Ofsted, 2003.*
30 *"Improving City Schools", Ofsted, 2000.*

3.41 Information collected during our focus groups and on school visits illustrated the importance of the role of parents and a school's relationship with them. All the schools we visited provided parents with reports on pupil progress and performance, and held parents' evenings. In some schools, the same teacher acted as head of year from the first year of entry over a number of years, and was therefore able to follow a pupil's progress through his or her secondary education and develop a long-term relationship with parents. Schools that employed attendance or home-school liaison officers considered that they also played a key role in developing relationships with parents.

3.42 Encouraging schools to develop links with their local communities is an integral feature of some of the Department's initiatives, especially in deprived areas. For example, Education Action Zones and the Excellence in Cities programme both involve schools working in partnership with other schools in the area, local education authorities, parents, businesses and other representatives from the local community. In addition, specialist schools are required to spend a third of their additional recurrent funding on developing effective links with their local communities and partner schools.

3.43 Research has indicated that the inclusion and engagement of pupils, families and community members in school activities have positive impacts on pupil achievement, attendance and behaviour, and that the school's role and value in the community are enhanced[31]. In the schools we visited, one of the most common ways of developing links with the community was to open up the school's facilities, particularly sports and computer facilities, to the wider community. Some schools also sponsored events for local residents. For example, Newcastle Community High School held tea parties for local elderly residents that were facilitated by the school's pupils. Schools that provided services to the local community considered that, while they were of benefit to local residents, the school and its pupils also benefited from a stronger, community-based ethos.

The physical environment of the school

3.44 Head teachers responding to our survey rated the importance of the influence of a school's accommodation and facilities on academic achievement as more than 8 out of 10. During our school visits we observed examples where the standard of accommodation appeared to have a substantial impact on the quality of education provided. In a number of schools, the poor condition of buildings and the inflexibility of their layout had a number of effects, such as making the school unattractive to potential new staff and discouraging good pupil behaviour. Many schools are unable to radically change accommodation, but even minor changes, such as repainting, can have a positive impact. Schools found that pupils responded well to any redecoration that was undertaken, even if the accommodation overall was in poor condition.

31 *"Towards the Development of Extended Schools", National Foundation for Educational Research, 2002.*

Appendix 1 Types of maintained secondary school

The School Standards and Framework Act 1998

1 This Act created four categories of maintained school:

- **Foundation schools** (501 schools in January 2002), where the governing body employs the school's staff and has primary responsibility for admission arrangements. The school's land and buildings are owned by the governing body or a charitable organisation.
- **Voluntary Aided schools** (549 schools) are similarly defined, although the governing body only contributes towards the capital costs of running the school.
- **Voluntary Controlled schools** (129 schools) are those where the Local Education Authority employs the school's staff and has primary responsibility for admission arrangements. The school's land and buildings are owned by the governing body or a charitable organisation.
- **Community schools** (2,278 schools) are those where the Local Education Authority employs the school's staff, has primary responsibility for admission arrangements, and owns the school's land and buildings.

Selective schools

2 There are 164 maintained secondary schools in England that can select all, or substantially all, of their pupils by reference to high general ability.

Specialist schools

3 Specialist schools are a key part of the Government's current proposals for a more diverse secondary school system. Initially, the only specialist schools were Technology Colleges, but the programme was subsequently extended to include other specialties. Maintained secondary schools in England can now apply to be designated as a specialist school in one of ten specialist areas: technology; languages; sports; arts (visual, performing or media); business and enterprise; engineering; science; mathematics and computing; music; and humanities (based around history, geography or English). Schools can also combine any two. Depending on the specialty chosen, specialist schools can select up to 10 per cent of their intake on the basis of aptitude in the specialty.

4 The aims of the Specialist Schools Programme are that specialist schools should develop a distinctive identity and ethos; strengthen and develop teaching and learning; and establish strong links with the community. The process of becoming a specialist school is designed not simply to raise performance in that part of the curriculum in which it wishes to become specialist, but to act as a lever for improvement across the entire school. The application process is based on a school's own priorities, which come from the school's own audit of its strengths and weaknesses. Schools are encouraged to develop a centre of excellence that fits their needs, to be used to disseminate lessons across the whole school, in order to develop provision for both pupils and the local community. Specialist schools are required to spend a third of their additional recurrent funding working with partner schools and the community. Specifically, they are expected to share the benefits of their specialty with at least five other schools, one of which must be a secondary school.

5 The specialist schools programme includes schools from across the performance spectrum (except the very weakest), as long as their applications meet the standard required. The total number of specialist schools increased to 1,448 in September 2003, and they are responsible for the education of more than one million young people. There are now specialist schools in all local education authorities that have secondary schools. The Government plans to progressively increase the number of specialist schools to 2,000 by September 2006. Since 1998-99, the additional cost of the specialist schools programme has been £400 million, including £145 million spent in 2002-03.

City Technology Colleges and Academies

6 When the Labour Government came into power in 1997 it abolished Grant Maintained School status but made no changes to the status of City Technology Colleges, which are publicly funded, independent, all-ability schools that offer the opportunity to study a curriculum geared towards the world of work. In 2000, the Government launched the Academies programme, which aims to challenge the culture of educational under-achievement and to deliver real improvements in standards in areas of disadvantage. Fifty-three Academies are due to be established by 2007. They will either replace one or more existing schools facing challenging circumstances, or will be established where there is a need for additional school spaces. Academies, like City Technology Colleges, are publicly funded, independent schools. Unlike City Technology Colleges, however, Academies are required by their funding agreements to follow the admissions law and codes that apply to maintained schools.

Beacon schools and Leading Edge schools

7 Established in 1998, the Beacon School programme identified schools that were among the best performing in the country. These schools were given additional resources to work closely with other schools to share best practice and drive innovation. In September 2002, there were 1,150 Beacon schools in England, including some 250 secondary schools. In 2002, the Government announced plans to replace the secondary Beacon Schools programme with the Leading Edge programme, and secondary Beacon Schools will be phased out by August 2005.

8 Leading Edge schools will lead innovation, spread their excellence, and challenge other schools to work with them so that they can raise standards and drive school improvement right across the system. Leading Edge schools will be selected from amongst the most successful and progressive secondary schools. The programme was launched in June 2003, with a view to building to a total of 300 schools by 2006.

Education Action Zones and Excellence in Cities schools

9 One of the ways the Government has sought to improve the performance of schools in deprived areas was to establish Education Action Zones. The first Zones were set up in 1998-99. They allow local partnerships to develop new and imaginative approaches to raising standards in disadvantaged urban and rural areas. Each Zone includes two to three secondary schools and local primary and special schools, working in partnership with local education authorities, parents, businesses and other representatives from the local community.

10 There are now 72 Education Action Zones in England. Twenty-five were set up in 1998-99, 40 in 1999-00 and the last eight in 2000-01. One zone has been wound up early. Each zone receives up to £750,000 funding per year from the Department and in return they are required to raise £250,000 per year from the private sector. Zones initially run for three years, with the possibility of extension for a further two years. Education Action Zones will be integrated into the Excellence in Cities programme as they reach the end of their statutory terms.

11 The Department established the Excellence in Cities programme in 1999 to address the educational problems of the major cities, where standards have been low, by providing significant additional support to enable schools to overcome the challenges facing them. The programme is being implemented through local partnerships crossing traditional local education authority boundaries, focusing on the needs and aspirations of individual pupils and their parents. It currently involves 58 local authority areas and 39 Excellence Clusters (groups of schools in small pockets of disadvantage which draw on the main strands of the programme). Expenditure on the programme in 2002-03 was £184 million.

Faith schools

12 As at January 2002, there were 586 secondary schools of designated religious character (357 Roman Catholic; 192 Church of England; 28 other Christian faith; 5 Jewish; and 4 other faith schools), most of which have been established as faith schools for a long time. Most are Voluntary Aided, although a significant number are Voluntary Controlled and a few are Foundation schools. Faith schools can also be selective and/or specialist schools. The Government has no specific policies to itself increase the number of faith schools, but in 2001 it stated that it would support the development of inclusive faith schools[32].

32 *"Schools achieving success", Department for Education and Skills, 2001, Cm 5320.*

Appendix 2 Study methodology

Introduction

1 This report is based on:

- quantitative analysis of the Department's National Pupil Database, the Pupil Level Annual School Census and gradings given by Ofsted following school inspections;
- qualitative research amongst teachers and head teachers;
- a postal survey of a sample of secondary school head teachers;
- visits to ten secondary schools;
- analysis of the substantial amount of existing research - items referred to in the report are listed in the bibliography;
- discussions with staff of the Department, Ofsted and other interested organisations; and
- consultation with a reference panel of experts.

Quantitative analysis

2 Our consultants, the National Foundation for Educational Research (NFER):

a) assessed the effect of producing measures of school performance that adjust the Key Stage 3 and GCSE academic performance measures of schools for pupil prior academic achievement and other pupil-level and school-level factors;

b) used these measures to compare the performance of different types of schools, including faith schools, specialist schools, selective schools, single sex schools, and beacon schools;

c) compared the progress of boys and girls;

d) assessed the relationship between the performance measures used in this study and a range of OFSTED judgements; and

e) assessed how much of the variation between the academic achievements of pupils attending different schools is explained by the external factors included in the analysis.

3 The main findings from this analysis are set out in Part 2 of the report. Further details of the analysis and methodology used by the NFER are set out in Appendix 3, and the NFER's full report can be found at www.nfer.ac.uk.

Focus groups of teachers and head teachers

4 Our consultants, IFF Research Ltd., ran four focus groups: one of teachers and one of head teachers in each of Birmingham and London. The main purpose of the groups was to identify:

- the factors, excluding prior achievement and other external factors, most likely to influence the academic performance of pupils up to the age of 16 years; and
- the main barriers to improving pupils' academic performance.

Survey of secondary school head teachers

5 We undertook a survey of a random sample of 389 secondary school head teachers, including at least one school from every local education authority. The aim of the survey was to establish which school management and teaching practices, and related factors, head teachers thought most influenced the academic achievements of pupils.

6 The survey was conducted during March and April 2003. Responses were received from 219 head teachers - a 56 per cent response rate.

Visits to secondary schools

7 We visited ten secondary schools of various types in different parts of England, some of which appeared to be providing a good standard of education and some which appeared to be performing relatively poorly. The schools visited were:

- Garth Hill College, Bracknell;
- Highbury Fields School, Islington;
- Holly Hall Mathematics and Computing College, Dudley;
- Newcastle Community High School, Newcastle-under-Lyme ;
- Priory School and Sports College, Barnsley;
- Redbridge Community School, Southampton;
- St Bonaventure's Roman Catholic School, Newham;
- The St Guthlac School, Crowland near Peterborough;
- Thorpe St Andrew School - a Specialist Sports College, Norwich; and
- Westfield School, Sheffield.

8 During each visit we held an extensive interview with the head teacher, and in most cases also had interviews, or group meetings, with other members of the senior team, heads of year and heads of department. Where possible, we also met a school governor and in some schools we were able to meet a group of students.

Reference panel of experts

9 We convened a panel to act as a sounding board for the development of the study methodology, and to comment on the emerging findings. The panel met twice during the course of the study. The members of the panel are as follows:

Name	Organisation/Position
Terry Creissen	Head teacher and representative for the National Association of Head Teachers
Deanne Fishbourne	Local Education Authority inspection/performance management specialist, Audit Commission
David Gillborn	Professor of Education, School of Educational Foundations and Policy Studies, Institute of Education, University of London
Timothy Key	Head of Research, Analysis and International Division, Office for Standards in Education (Ofsted)
Lesley Longstone	Acting Director, Secondary Education Group, Department for Education and Skills
David Parr	Secondary school consultant, Surrey Local Education Authority
Andrew Ray	Head of Standards and Delivery Analysis Unit, Analytical Services Division, Department for Education and Skills
Ann Short	Secondary School Development Adviser, London Borough of Tower Hamlets
Peter Wanless	Director, Secondary Education Group, Department for Education and Skills

Appendix 3 Outline of the data and methodology for the quantitative analysis, and results

Source data

1 The Department supplied the NFER with a set of data files extracted from the National Pupil Database (version 2) and other departmental databases. The data comprised:

- GCSE/GNVQ outcomes for all pupils in Year 11 in 2002;
- Key Stage 3 outcomes for Year 9 pupils in 2002 and earlier years;
- Key Stage 2 outcomes for Year 6 pupils in 2002 and earlier years;
- pupil-level background information for all pupils in 2002, based on the Pupil Level Annual Schools Census (PLASC); and
- school-level background information, including type of school, such as specialist, beacon and faith.

2 The data files were combined to produce two separate datasets, including outcomes, prior achievement and background information at pupil and school levels:

- GCSE/GNVQ outcomes for 2002 Year 11 linked to Key Stage 3 achievement in 2000, adjusted for pupil and school level background information; and
- Key Stage 3 outcomes for 2002 Year 9 linked to Key Stage 2 achievement in 1999, adjusted for pupil and school level background information.

3 These two datasets are labelled as 'KS3-4' and 'KS2-3' for brevity. The extent of matching achieved for each dataset is set out in **Table 1**.

4 The variables used in setting up the models can be divided into four main groups:

- outcome measures at the end of the key stage;
- prior achievement measures at the start of the key stage;
- pupil background information; and
- school background information.

Outcome measures at the end of each stage

5 The outcome measures for the two key stage analyses were the same as those used in the Department's analysis (paragraph 1.17 on page 15). They were:

- **KS3-4**: Total GCSE/GNVQ points achieved in the best 8 subjects entered. GCSE points were awarded as 8 for A*, 7 for A, down to 1 for G, with equivalent points defined for GNVQ outcomes.
- **KS2-3**: Average "points score" from Key Stage 3 national tests, averaged over the three core subjects - English, mathematics and science. The "point score" is derived from the test level by multiplying by 6 and adding 3 (such that level 4 scores 27 points, level 5 scores 33 points, and so on).

1 Data Matching for KS3-4 and KS2-3 datasets

	KS3-4	KS2-3
Number of pupils in dataset	586,357	619,896
Percentage with prior achievement data	92.6	95.1
Percentage with PLASC data	91.2	93.3
Percentage with school-level data	90.9	95.8
Percentage with prior achievement, PLASC and school-level data	**84.3**	**82.2**

Prior achievement measures at the start of the key stage

6 The prior achievement measures for the two key stage analyses were:

- **KS3-4:** Key Stage 3 prior achievement variables were essentially the same as the outcomes for the KS2-3 analysis, but scores for each subject were included separately in the model, and average points score was used for some variables.
- **KS2-3:** Key Stage 2 point scores in each core subject were used. These were included separately in the model, with average points score used for some variables.

Pupil background information

7 The pupil background variables were essentially the same for both KS2-3 and KS3-4 analyses, and are set out in **table 2**.

School background and school type information

8 The school background variables were also the same for both KS2-3 and KS3-4 analyses, and are set out in **table 3**.

9 Although variables to indicate school type were not used to generate any of the residuals[33] from the modelling, the NFER did carry out analyses to compare the performance of different school types. The broad categories of school that were examined included:

- selective (grammar) schools;
- specialist schools;
- faith schools;
- beacon schools;
- single sex schools; and
- schools in Education Action Zones.

We also examined whether the presence of selective schools had an impact on the performance of other schools in the same local eduation authority.

2 Pupil background variables

Pupil stability	To identify pupils who joined the school part way through the key stage
Gender	To distinguish boys from girls
Age	To identify the age of pupils at the start of the key stage
Free school meal indicator	To identify pupils who are eligible for free school meals - a proxy measure to identify pupils from families on low incomes
Free school meal information missing	To identify where the free school meal status of a pupil is unknown or not recorded
English as an additional language	To identify pupils for whom English is not their first language
Special educational needs (SEN)	To identify pupils who have special educational needs and which stage they are at (stage 1 to stage 5)
Ethnicity	To identify the ethnicity of pupils as either: White UK, White (Non UK), Black Caribbean, Black African, Black Other, Indian, Pakistani, Bangladeshi, Chinese, Other or Unknown

3 School background variables

Pupil stability	Percentage of pupils who have been at the school since the start of the key stage
Free school meals	Percentage of pupils known to be entitled to free school meals
English as an additional language	Percentage of pupils for whom English is not their first language
Special educational needs	Percentage of pupils who have special educational needs

33 A residual is the difference between an actual observed value and the value predicted by a statistical model.

Methodology

10 The main analysis technique used was multilevel modelling. This is a development of a common statistical technique known as 'regression analysis', which is a method for finding a straight-line relationship that enables the prediction of values of some measure of interest ('dependent variable') given the values of one or more related measures ('independent variables'). For example, regression analysis could be used to predict schools' average test performance given some background factors, such as free school meals and school size.

11 Multilevel modelling takes account of data which are grouped into similar clusters at different levels. For example, individual pupils are grouped into schools, and those schools are grouped within local education authorities. There may be more in common between pupils within the same school than with other schools, and there may be elements of similarity between different schools in the same local education authority. Multilevel modelling takes account of the hierarchical structure of data and produces more accurate predictions than regression analysis, as well as estimates of the differences between pupils, between schools, and between local education authorities.

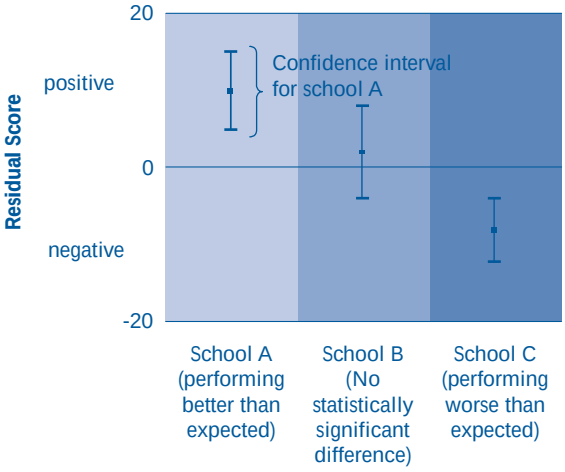
12 The analyses were run in four stages:

- using outcome measures only ("baseline");
- including prior achievement at the start of the key stage;
- adding in other pupil-level background variables; and
- adding in school-level background variables.

13 The results of these analyses give quantities called "school-level residuals". These can be thought of as a score for each school, which shows the extent to which a school's performance differs from the level that would be expected once the background variables that apply to that school and its pupils have been taken into account. These residuals are estimates based on the statistical models used to control for the background variables. Consequently they are reported not as single numbers, but as a plausible range of values (a so-called "confidence interval") for each school. This allows for the inherent uncertainty entailed in the estimation process, and helps to avoid drawing conclusions about relative performance on the basis of spuriously precise scores.

14 The residual score for each school can be interpreted as follows. If the entire confidence interval is *positive* - as is the case for school A in **Figure 13** - this suggests that the school is performing significantly better than its expected level, once the background variables that were included in the model have been taken into consideration. If the entire confidence interval is *negative* - as is the case for school C in figure 13 - this suggests that the school is performing significantly worse than its expected level. If, however, the confidence level *includes zero* - as is the case for school B in figure 13 - then there is no statistically significant difference between the school's actual performance and the level of performance that would be expected on the basis of the model.

13 Interpreting school-level residuals



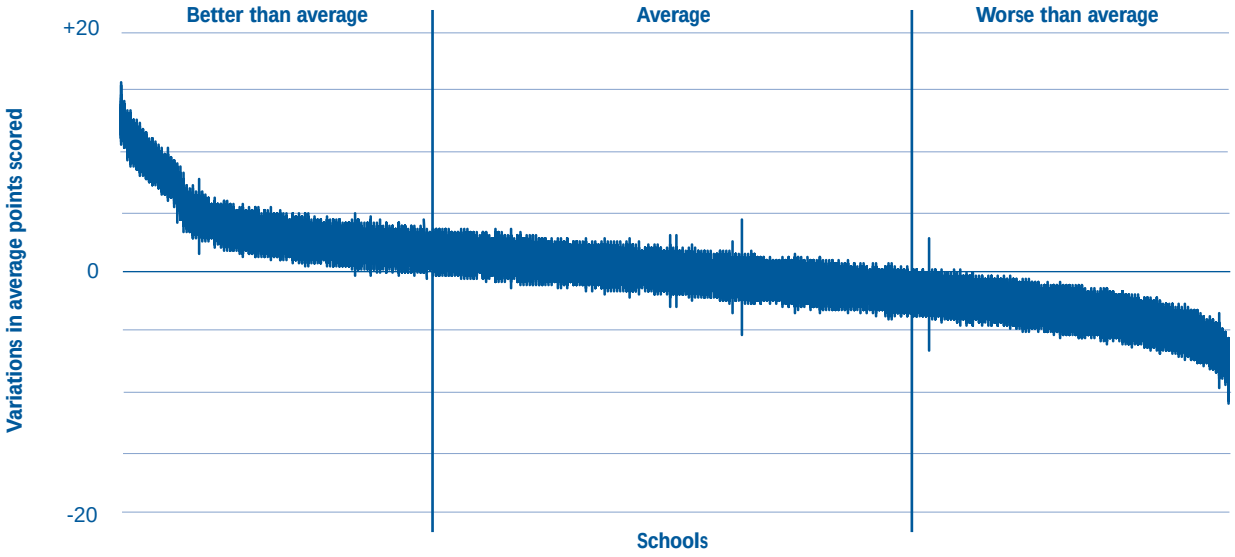
15 It is possible to plot confidence intervals for school-level residuals in this way for all secondary schools included in the analysis. **Figures 14 and 15** show these for school performance measures based on Key Stage 3 results in 2002, and **Figures 16 and 17** show them for GCSE results in 2002.

Variations in school performance

16 We examined the variations between the performance of pupils at different schools at Key Stage 3 and GCSE level in 2002. A comparison of the academic achievements of pupils in different schools at Key Stage 3 showed some wide variations (figure 14). However, when adjustments were made for the prior achievement of the pupils and other external factors, the range of the variation diminished (figure 15). Similarly, GCSE results showed wide variations between schools (figure 16), which diminished when adjustments were made for prior achievement and other external factors (figure 17).

14 Variations between schools in the average points scored by pupils in Key Stage 3 tests in 2002

In figure 14, 981 (31%) of schools were performing significantly better and 929 (30%) of schools were performing significantly worse than average. Against a national average points score of 34.2 points per pupil, pupils in the best performing school were achieving 88 per cent more points than pupils in the worst performing school.



NOTE

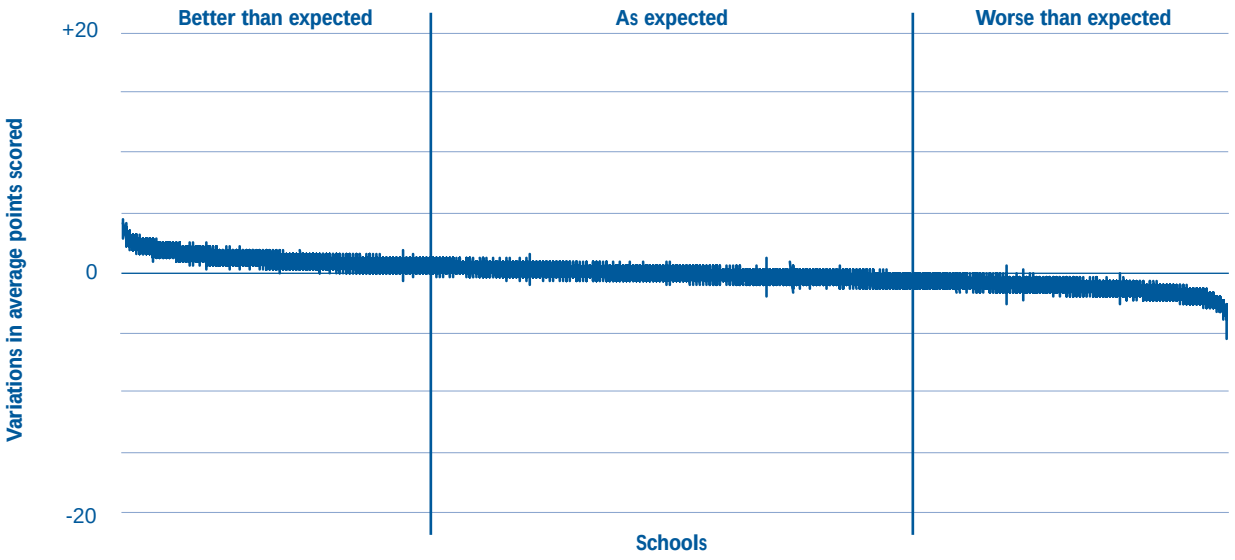
1. A difference of two in average points scored represents, for example, an average difference of one level or grade in one subject at Key Stage 3 for all pupils in a school.

2. Schools with longer vertical lines had smaller numbers of pupils in the data.

Source: National Foundation for Educational Research

15 Variations between schools in the average points scored by pupils in Key Stage 3 tests in 2002, after allowing for external factors

In figure 15, 841 (27%) of schools were performing significantly better and 936 (30%) of schools were performing significantly worse than expected. Against a national average points scored of 34.2 points per pupil, pupils in the best performing school were achieving 29 per cent more points than pupils in the worst performing school.



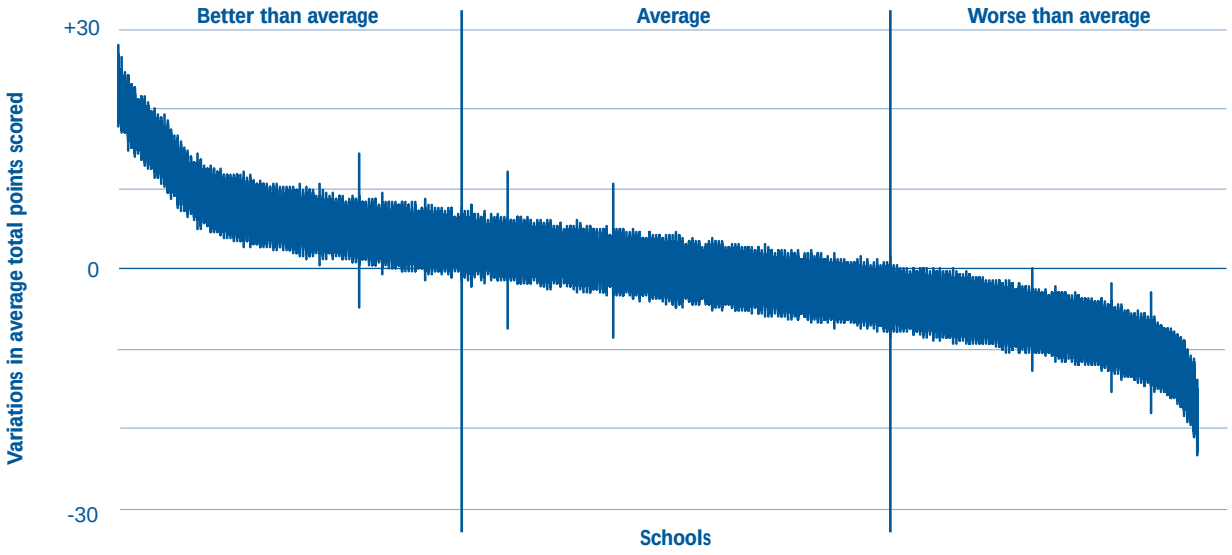
NOTE

A difference of two in average points scored represents, for example, an average difference of one level or grade in one subject at Key Stage 3 for all pupils in a school.

Source: National Foundation for Educational Research

16 Variations between schools in the average total points scored (best 8 subjects) by pupils in GCSE examinations in 2002

In figure 16, 1,013 (33%) of schools were performing significantly better and 920 (30%) of schools were performing significantly worse than average. Against a national average points scored of 35.9 points per pupil, pupils in the best performing school were achieving 270 per cent more points than pupils in the worst performing school.



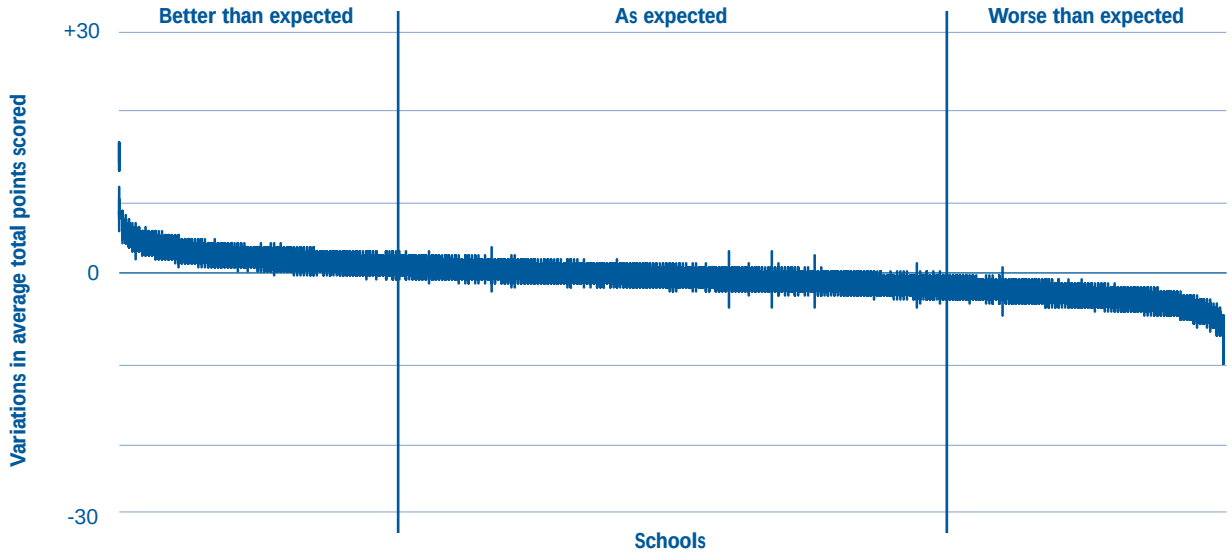
NOTE

A difference of one in average points scored represents, for example, an average difference of one grade in one of the best eight subjects at GCSE level for all pupils in a school.

Source: National Foundation for Educational Research

17 Variations between schools in the average total points scored (best 8 subjects) by pupils in GCSE examinations in 2002, after allowing for external factors

In figure 17, 783 (25%) of schools were performing significantly better and 851 (27%) of schools were performing significantly worse than expected. Against a national average points scored of 35.9 points per pupil, pupils in the best performing school were achieving 86 per cent more points than pupils in the worst performing school.



NOTE

A difference of one in average points scored represents, for example, an average difference of one grade in one of the best eight subjects at GCSE level for all pupils in a school.

Source: National Foundation for Educational Research

The effect of external factors on school performance

17 The impact on measures of academic performance of adjusting for external factors depends, in part, on the influence of each factor. This can be expressed in terms of normalised coefficients[34]. The size of the normalised coefficient shows the relative importance of the variable in explaining variations in outcomes. Positive values suggest a positive relationship between the background variable and the outcome measure; negative values suggest that the outcome measure decreases with higher values of the background variable **(table 4)**.

4 Significant normalised coefficients for Key Stage 3 and GCSE

Variable	Key Stage 3	GCSE
Impact of prior achievement variables		
Prior achievement - English points score	36.1	31.3
Prior achievement - Mathematics points score	38.5	30.2
Prior achievement - Science points score	22.8	29.9
Interaction of low prior achievement and prior achievement average value	-18.1	-9.8
Impact of other pupil-level variables		
Indicator of whether pupil is female	1.9	8.4
Age of pupil in months at relevant key stage	-1.7	-2.2
Special educational needs - Stage 1	-3.5	-2.8
Special educational needs - Stage 2	-5.8	-4.9
Special educational needs - Stage 3	-5.0	-5.6
Special educational needs - Stage 4	-0.9	-0.3
Special educational needs - Stage 5	-3.6	-1.7
Ethnicity - White Other (Non-British)	0.3	1.1
Ethnicity - Black Caribbean	-0.6	1.2
Ethnicity - Black African	0.4	2.2
Ethnicity - Black Other	-0.3	0.6
Ethnicity - Indian	1.3	2.4
Ethnicity - Pakistani	-0.2	2.0
Ethnicity - Bangladeshi	0.4	1.7
Ethnicity - Chinese	1.3	0.8
Ethnicity - Other	0.9	1.3
Ethnicity - Unknown	-1.4	-1.7
Free School Meal Indicator	-4.7	-5.8
Free School Meal Information Unavailable	-	-5.4
English as Additional language	2.1	5.6
Pupil Stability	3.8	5.9
Impact of school-level variables		
Percentage of pupils eligible for free school meals	-24.6	-14.8
Percentage of pupils eligible for free school meals, squared	12.3	11.3
Percentage English additional language in school	2.7	-
Percentage Special Educational Needs in school	-2.9	0.7
Percentage pupil stability in school	-3.8	-1.9

NOTES

1. Not all of the variables used in the model are included in this table. For a complete list see the NFER's report at www.nfer.ac.uk.
2. No entry in the table means that the factor has no significant influence.

34 The normalised coefficient for a particular background variable is the change in the outcome measure (expressed as a percentage of its standard deviation) associated with one standard deviation change in the background variable, when all other variables are taken into account. (Standard deviation is a measure of the spread of some quantity in a group of individuals).

Bibiography

Books

Date	Author	Title
1997	C T Fitz-Gibbon, University of Durham	The Value-added National Project: Final Report
1997	P Mortimore and G Whitty (Institute of Education)	Can school improvement overcome the effects of disadvantage?
1998	Ofsted	Secondary Education: a review of secondary schools in England 1993-97
1999	M Thrupp	Schools Making a Difference: Let's be realistic
1999	Ofsted	Lessons learned from Special Measures
1999	Ofsted	Raising the attainment of minority ethnic pupils: School and LEA responses
1999	Ofsted	Handbook for Inspecting Secondary Schools with guidance on self-evaluation
1999	D Crook, S Power, G Whitty (Institute of Education)	The Grammar School Question: A review of research on comprehensive and selective education
1999	J Elwood and C Gipps (Institute of Education)	Review of Recent Research on the Achievement of Girls in Single-Sex Schools
2000	P Mortimore, S Gopinathan, E Leo, K Myers, L Sharpe, L Stoll and J Mortimore (Institute of Education)	The Culture of Change: Comparative case studies of improving schools in Singapore and London
2000	H Goldstein, P Huiqi, T Rath, N Hill (Institute of Education)	The use of value-added information in judging school performance
2000	D Jesson, University of York	The Comparative Evaluation of GCSE Value-added Performance by Type of School and LEA
2000	D Mayston, University of York	Performance Management and Performance Measurement in the Education Sector
2000	D Gillborn (Institute of Education) & H S Mirza (Middlesex University) for Ofsted	Educational Inequality: Mapping Race, Class and Gender: a synthesis of research evidence
2001	Department for Education and Employment	Learning and teaching - A strategy for professional development

Date	Author	Title
2001	Department for Education and Skills	Education and Skills: Delivering Results - a Strategy to 2006
2001	Department for Education and Skills	Schools: building on success *Cm 5050*
2001	Department for Education and Skills	Schools achieving success *Cm 5230*
2001	Ofsted	Improving Attendance and Behaviour in Secondary Schools
2001	Statistical Directorate, National Assembly for Wales	Church School Secondary Education in Wales: Examination and attendance data, 2000 (SDB 21/2001)
2001	Department for Education and Skills	Statistics of Education: Pupil Progress in Schools in England: 2000 (Issue No 03/01)
2001	J Burn, J Marks, P Pilkington, P Thompson (Civitas)	Faith in Education: The role of the churches in education: a response to the Dearing Report on church schools in the third millennium
2001	Ofsted	Specialist schools: An evaluation of progress
2001	Ofsted	Managing Support for the Attainment of Pupils from Minority Ethnic Groups
2001	Ofsted	Providing for gifted and talented pupils: An evaluation of Excellence in Cities and other grant-funded programmes
2001	Organisation for Economic Co-operation and Development	Knowledge and Skills for Life: First Results from PISA 2000
2002	Ofsted	Good teaching, effective departments - Findings from a HMI survey of subject teaching in secondary schools, 2000/01, HMI 337
2002	S Power, S Warren, D Gillborn, A Clark, S Thomas, K Coate (Institute of Education)	Education in Deprived Areas: Outcomes, inputs and processes
2002	D Jesson (Technology Colleges Trust)	Value-added and the benefits of specialism
2002	S Schagen, D Davies, P Rudd, I Schagen (National Foundation for Educational Research)	The Impact of Specialist and Faith Schools on Performance
2002	Department for Education and Skills	14-19: extending opportunities, raising standards *Cm5342*
2002	Northern Ireland Audit Office	Indicators of Educational Performance and Provision
2002	Ofsted	Achievement of Black Caribbean Pupils: Good Practice in Secondary Schools

Date	Author	Title
2002	P Rudd, S Aiston, D Davies, M Rickinson, L Dartnell (National Foundation for Educational Research)	High Performing Specialist Schools: What Makes the Difference
2002	Ofsted	National Summary Data Report for Secondary Schools
2002	Department for Education and Skills	Statistics of Education: Pupil Progress in Secondary Schools by School Type in England: 2001 (Issue No 05/02)
2002	Ofsted	Changing schools: Evaluation of the effectiveness of transfer arrangements at age 11
2002	Ofsted and Audit Commission	Local education authorities and school improvement 1996-2001
2003	Department for Education and Skills	14-19: opportunity and excellence
2003	Department for Education and Skills	A New Specialist System: Transforming Secondary Education
2003	Department for Education and Skills	Academies - Schools to make a difference: a guide for sponsors and other partners
2003	Department for Education and Skills	Minority Ethnic Attainment and Participation in Education and Training: The Evidence
2003	Ofsted	The Annual Report of Her Majesty's Chief Inspector of Schools: Standards and Quality in Education 2001/02
2003	Ofsted	The Framework for inspecting schools in England from September 2003
2003	Ofsted	Good assessment in secondary schools
2003	Ofsted	The Key Stage 3 Strategy: evaluation of the second year
2003	Ofsted	Excellence in Cities and Education Action Zones: management and impact
2003	Ofsted	Key Stage 4: towards a flexible curriculum
2003	D Jesson (Specialist Schools Trust)	Educational outcomes and value added by specialist schools - 2002 analysis

Papers

Date	Author	Title
1992	H Goldstein et al (Institute of Education)	A Multilevel analysis of school examination results
1996	C T Fitz-Gibbon & N J Stephenson, University of Durham	Inspecting Her Majesty's Inspectors
1997	H Goldstein and K Myers (Institute of Education)	School effectiveness research: a bandwagon, a hijack or a journey towards enlightenment?
1998	H Goldstein (Institute of Education)	Targets, performance indicators and the proper uses of educational data
1998	D Coryton *Education Journal*	Selection battle - truth the first casualty
1999	H Goldstein *Statistics in Society*	Performance Indicators in Education
2000	H Goldstein and G. Woodhouse (Institute of Education) *Oxford Review of Education*	School effectiveness research and Educational policy
2001	H Goldstein (Institute of Education) *Science in Parliament*	League tables and schooling
2001	D Jesson (University of York)	Selective systems of education - blueprint for lower educational standards?
2001	D Hopkins and D Reynolds, University of Exeter	The past, present and future of school improvement: towards the third age
2001	C Teddlie and D Reynolds, University of Exeter	Countering the critics: responses to recent criticisms of school effectiveness research
2001	C Teddlie and D Reynolds, University of Exeter	School effectiveness and improvement: past, present and future
2001	D Reynolds, B P M Creemers, C Teddlie and S Stringfield, University of Exeter	World class schools - some preliminary findings from the international school effectiveness research project
2001	D Reynolds, University of Exeter	Beyond school effectiveness and school improvement (in 'School Improvement: Alternative Perspectives' edited by N Bennett and A Harris)
2001	C Chitty, A Edwards, R Glatter, M Maden, R Pring, S Tomlinson, G Whitty and A West (Campaign for State Education)	Comprehensive secondary education - building on success
2001	I Schagen and S Schagen	The Impact of Selection on Pupil Performance
2002	Frontier Economics	Education x 3: Understanding low achievement