RESEARCH

Patterns of Participation in Full-time Education after 16: An Analysis of the England and Wales Youth Cohort Study

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The Policy Studies Institute is contracted only to analyse YCS data: questionnaire design, fieldwork, coding and data preparation are carried out under a separate contract. The data used in the report come mainly from Sweeps 1, 2 and 3 of YCS Cohort 9 and Sweep 1 of YCS Cohort 10. Sweep 1 of Cohort 9 was designed and conducted by The National Centre for Social Research (formerly known as SCPR), while Sweeps 2 and 3 of Cohort 9 and Sweep 1 of Cohort 10 were designed and conducted by Research Services Great Britain. Thanks are due to both organisations for making the data available and for help with queries. Thanks are also owed to Karen Mackinnon of the Policy Studies Institute for her highly efficient help in setting up the data in SPSS.

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DISCLAIMER

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ABBREVIATIONS

A level	Advanced Level
AS	Advanced Supplementary
CSE	Certificate of Secondary Education
DfE	Department for Education
DfEE	Department for Education and Employment
DfES	Department for Education and Skills
EMA	Educational Maintenance Allowance
FE	Further Education
GCE	General Certificate of Education
GCSE	General Certificate of Secondary Education
GNVQ	General National Vocational Qualification
GST	Government-supported training
LEA	Local Education Authority
NVQ	National Vocational Qualification
s.d.	standard deviation
SFR	Statistical First Release
SOC	Standard Occupational Classification
unwtd	unweighted
wtd	weighted
YCS	Youth Cohort Study

EXECUTIVE SUMMARY

Introduction

Although the proportion of young people in England and Wales who stayed on in full-time education after age 16 rose rapidly from the late 1980s up until the mid 1990s, it then fell back a little. Though now growing again, staying on rates have not yet regained their previous high point. Thus this report aims to identify the groups of young people amongst whom there is still scope for increasing educational participation. It also explores the further choices that young people must make when starting Year 12, about which courses to take and where to study. It shows how these choices relate not only to results in Year 11 GCSEs, but also to sex, ethnicity and home background. Raising levels of participation in post-compulsory full-time education is of course not a sensible policy goal if it creates high rates of wastage. Thus a further aim of the report is to estimate retention rates for different groups of young people and to explore the factors that encourage retention. The report also provides some information on 16 year old school leavers who return to full-time education during the following two or three years.

The report is based on the England and Wales Youth Cohort Study (YCS), a regular survey which tracks very large nationally representative samples of young people between the ages of 16 and 19 by means of postal surveys and telephone interviews. The report draws particularly on YCS Cohort 9, which reached minimum school leaving age in summer 1997, and YCS Cohort 10, which reached minimum leaving age in summer 1999.

Trends at age 16

Between the late 1980s and the mid 1990s, staying on rates in full-time education grew rapidly. This growth was matched by falls in the proportion of young people who went straight into full-time jobs or entered government-supported training (GST). There was no fall in the proportion of 16/17 year olds who had no full-time place in education, employment or training.

In part, the growth in staying on rates represented a shift of vocational education from the workplace to the classroom. Formal work-based job training for young people declined, and the rise in the total proportion of the age group getting either full-time

education or formal job training was much less than the rise in educational participation alone.

Good examination results at age 16 encourage young people to stay in full-time education, and the improvement in results following the introduction of GCSEs was an important factor in pushing up staying on rates. GCSE results improved most during the period when staying-on rates in full-time education were rising fastest, but they continued to improve, though at a slower rate, after staying-on rates had levelled off. Throughout the period, girls achieved better GCSE results than boys, and this sex gap still shows no sign of narrowing.

Time trends in staying on rates were very different at different levels of GCSE achievement. Staying on rates rose fastest for young people with very poor GCSE results, with growth continuing almost uninterrupted since the late 1980s. Although young people with very good GCSE results had very high staying on rates throughout the period, their staying on rate peaked in the first half of the 1990s and then declined slightly. For young people with moderately good GCSE results, staying on rates initially rose very fast, but they levelled out out in the early 1990s and fell somewhat in the second half of the decade.

Although staying on rates grew fastest for those with poor GCSE results, the overall improvement in GCSE results was big enough to produce a rise in average levels of GCSE attainment amongst full-time Year 12 students. The increase in the proportion of students with eight or more A-C grades was particularly marked.

Initially, the improvement in GCSE results was confined to mainly to state schools, results in independent schools being already extremely good. After the mid-1990s, however, results in independent schools improved by almost as much as in state schools. Comprehensive schools with sixth forms tended to have better GCSE results than comprehensive schools without sixth forms, and the gap remained constant throughout the 1990s.

Young people of Indian origin did on average much better in GCSEs than white students, while young black people and those of Pakistani or Bangladeshi origin did much worse. Young people of other ethnic origins (including Chinese) also tended to have very good results. YCS data give no indication that differences in GCSE results between ethnic groups have narrowed over the last decade.

Group differences in staying on rates

Throughout the period covered by the study, females were consistently more likely than males to stay on in full-time education after 16. For young people with five or more A-C grades at GCSE, the sex gap was quite small, but the gap widened as results got poorer. This pattern reflected the gendered nature of the labour market for young people, and the better opportunities that young men had for work-based training.

There was a North-South divide in staying on rates in full-time education which remained even after differences in GCSE results, home background, ethnicity and other relevant factors had been taken into account. Regional differences in staying on rates were much wider for young people with middling or poor GCSE results than for young people with good results.

All the minority ethnic groups that YCS sample numbers permit us to distinguish had much higher rates of participation in post-compulsory education than young white people. Young people of Indian origin, who did best in GCSEs, had the highest staying on rate, at 92%. However young black people and those of Pakistani and Bangladeshi origin, who had on average poorer GCSE results than whites, still had staying on rates of 84% and 81% respectively, compared to 69% for whites. Just like sex and region, ethnicity made a much bigger difference amongst young people with poor GCSE results than amongst those with good results.

Although home background is strongly related to GCSE results, wide differences in staying on rates between young people from more and less advantaged home backgrounds were still found after GCSE results had been taken into account. Before the current pilots for mandatory Educational Maintenance Allowances (EMAs) began, Local Education Authorities had the power to offer discretionary EMAs to help young people from poor families to stay in full-time education. In spring 1998 discretionary EMAs were received by 9% of Year 12 students, though there was considerable regional variation. The grants appear to have been fairly well targeted on less advantaged students, but the amount awarded varied a lot.

Year 12 courses and institutions

When staying on rates at 16 were rising fast in the early 1990s, the proportion of full-time Year 12 students who were studying for A or AS levels fell somewhat, but more recently it has almost recovered its 1989 level of around three fifths. The proportion of all 16/17 year olds (including those not in full-time education) who were on A/AS courses rose steadily throughout the period, from 28% in spring 1989 and reaching

40% in spring 2000. However it has become less usual to take other courses alongside A/AS levels.

Over the same period there was a fall in the proportion of full-time Year 12 students who were only doing GCSE re-sits - in spring 2000 this was just 3% of students. However the proportion of Year 12 students taking only vocational courses rose from 21% in 1989 to 32% in 2000.

Course choice in Year 12 was strongly influenced by GCSE results. In spring 2000, Year 12 A/AS students had a mean total GCSE points score of 54, equivalent, for example, to six A grades and two B grades, while Level 3 vocational students had a mean GCSE points score of 41, equivalent, for example, to seven C grades and one B grade. On average the students with the poorest GCSE results were vocational students on Level 2 or Level 1 courses and those who were taking only GCSE re-sits.

Because female students had on average better GCSE results than males, they were more likely than males to be on A/AS courses in Year 12. However, comparing young people with similar GCSE results, male students were a little more likely than female students to take A/AS courses and female students were a little more likely than male students to take vocational courses. Ethnic minority students were also more likely to opt for A/AS levels than white students with similar GCSE results. Course choice was also influenced by parental occupation, students with parents in partly skilled and unskilled occupations being more likely to take vocational courses than students with similar GCSE results whose parents were in higher level occupations.

The type of school that young people attended in Year 11 was a very strong determinant of their place of study in Year 12. Pupils in selective and independent schools almost always stayed in the sixth form of the school where they spent Year 11. In comprehensive schools with sixth forms, around two-thirds of continuing students stayed in a school sixth form while about a quarter moved to FE college. In comprehensive schools without sixth forms, where students could not stay in the same school, about a third of continuing students moved to sixth form colleges and around half moved to FE college. Sixth form colleges drew about three quarters of their full-time Year 12 students from comprehensive schools without sixth forms and only a fifth from comprehensive schools with sixth forms, while FE colleges drew much more equally from these two sources.

In school sixth forms and sixth form colleges around three quarters of Year 12 students took A/AS level courses, compared to about a fifth of full-time students in FE colleges. In contrast, nearly three quarters of full-time FE college students took vocational qualifications, with 28% aiming for Level 3. Though school sixth forms

and sixth form colleges had a similar mix of courses, sixth form colleges had more students re-taking GCSEs. This pattern reflected the relative strengths of the three types of institution in terms of pass rates.

In view of their much greater number of A/AS students, it was not surprising that Year 12 students in sixth forms and sixth form colleges had on average much better GCSE results than Year 12 students in FE colleges. However A/AS students in FE colleges also had significantly poorer GCSE results than A/AS students in school sixth forms and sixth form colleges. Taking courses of all levels together, vocational students in sixth form colleges had better GCSE results than vocational students in school sixth forms, who in turn had better GCSE results than vocational students in FE colleges. However Level 3 vocational students in school sixth forms and FE colleges had equally good GCSE results.

Retention and returns

We need to understand not only what encourages young people to start full-time education courses after age 16, but also what encourages them to persevere with their studies. However retention rates must be interpreted with care, as by no means all Year 12 students who leave full-time education before the end of Year 13 should be seen as drop-outs.

Four-fifths of 16/17 year olds who were in full-time education in spring 1998 were still full-time students twelve month later. Statistical modelling, controlling for a range of relevant factors, showed that better GCSE results strongly increased the probability of staying to the end of Year 13. Groups with above average staying-on rates at age 16 also had above average retention rates - these included young women, members of minority ethnic groups, and young people from advantaged home backgrounds. Behaviour in school in Years 10 and 11, attitudes towards school and satisfaction with the path taken in Year 12 were also significant variables.

Not surprisingly, students on Year 12 courses that typically last just one year were less likely to stay to the end of Year 13 than students studying for A or AS levels. However students on Level 3 vocational courses, which take two years to complete, were significantly less likely to stay to the end of Year 13 than A/AS students, even after adjusting for their generally poorer GCSE results and other relevant factors.

Although FE colleges had lower crude retention rates than schools or sixth form colleges, modelling indicated that they were just as good at keeping students as schools or sixth form colleges once retention rates were adjusted for the poorer GCSE results of their intake and for the type of courses that their students do.

Other things being equal, EMAs had a modestly positive impact in encouraging Year 12 students to stay to the end of Year 13. There was also evidence that Year 12 students who had not held a job since the end of Year 11 were more likely to stay in full-time education until the end of Year 13 than students who had been doing casual or part-time paid work in Year 12.

Only 6% of young people who were not in full-time education at age 16/17 had returned to full-time education 12 months later, as also had 6% of young people who were not in full-time education at age 17/18. It appeared that most went back in order to take vocational courses at FE college.

The same factors that were associated with staying on after 16 also encouraged 16 year old leavers to return to full-time education. Good GCSE results were an important factor, and groups who were over-represented amongst returners included young women, members of minority ethnic groups (especially young black people and those of Pakistani/Bangladeshi origin), and young people from advantaged home backgrounds.

Policy issues

The report highlights a number of issues in current educational policy for 16-18 year olds.

- The declining participation rates of young people with good, but not top, GCSE results give cause for concern, particularly as there has been no recent increase in the proportion of young people getting formal work-based training.

- Staying on rates for young people with poor GCSE results continue to climb, and meeting the needs of such students can present difficulties.

- All minority ethnic groups show a strong commitment to education. For those of Indian origin, this commitment is matched by outstanding levels of attainment in GCSEs. However for young black people and those of Pakistani or Bangladeshi origin there is a disparity between the commitment shown and the levels of attainment reached, which shows no signs of decreasing.

- Regional differences in educational participation have not attracted the attention they deserve. Like home background, region has a particularly big effect on the participation rates of young people with poor GCSE results.

- The discretionary EMAs in place before the current pilots of mandatory EMAs began had a modestly positive effect in encouraging full-time Year 12 students to stay to the end of Year 13.

- Students' GCSE results show clearly that Level 3 GNVQs do not have parity of esteem with A levels. It is a matter of concern that, other things being equal, Level 3 vocational students are less likely to stay to the end of Year 13 than A level students.

1 INTRODUCTION

Background and aims

This report comes out of a long-standing programme of research based on the England and Wales Youth Cohort Study into the education, employment and training undertaken by young people after reaching the end of compulsory full-time education. Previous studies in the series have covered many different aspects of this topic. They include broad overviews of recent trends in choices at 16, and range through more in-depth studies of, for example, work-based training, the progress of young people with poor GCSE results and the extent of non-participation in any form of education, work or training, down to studies with a very specific focus, such as success rates in different post-16 qualifications, factors encouraging the study of science and mathematics and the role of careers advice and guidance in young people's choices.[1]

The focus in the present report is on the route that most 16 year olds take, which is to stay on in full-time education after the minimum leaving age. For many years now all major UK political parties have shared the goal of increasing participation in post-compulsory education. However, although the participation rate at age 16 rose rapidly from the late 1980s to the middle of the last decade, it dipped again in the late 1990s, leaving the UK lagging well behind many European countries. The participation rate has since started to rise again, and in England it stood at 71.6% at the end of the calendar year 2000, but it has not yet regained its previous high point of 72.6% in 1993.[2] One of the aims of this study is to compare staying on rates for different groups of young people and to identify those where there is still scope for increasing participation.

Given that they have decided to stay on, young people have to make further choices about which courses to take. The range and structure of the qualifications offered to 16-18 year olds has changed substantially in recent years and continues to attract vigorous debate. Thus the second aim of the report is to explore the choice between academic and vocational qualifications, and how this not only relates to results in Year 11 GCSEs, but is also influenced by sex, ethnicity and home background.

Increasing post-16 participation is of course not in itself a sensible policy goal unless young people feel that they have made the right choice. If not, they risk dropping out before they have completed their courses, and wastage of this kind is both expensive

[1] Recent papers in the series are listed in the Appendix.
[2] DfES 2001, Table 6.

for the state and frustrating for the individuals concerned. Thus a further aim of the report is to determine how many young people who stay on in full-time education at 16 continue their education into a second post-compulsory year, and to explore the factors that encourage retention.

Finally, the decision to leave full-time education at 16 is not of course irreversible. Thus the report includes a brief look at the small minority of young people who leave full-time education at 16 but return during the following two or three years.

The England and Wales Youth Cohort Study

The report is based on data from the England and Wales Youth Cohort Study (YCS), a regular and long-standing series of surveys funded by the Department for Education and Skills (DfES) which follows young people over the first few years after the end of compulsory full-time education. Each YCS cohort covers a large nationally representative random sample of young people whose birthdays fall within the same school year. Thus the first YCS cohort reached minimum school leaving age in summer 1984; the tenth in summer 1999. Both state and independent schools in England and Wales are sampled, but special schools are not covered. The first survey, known as Sweep 1, takes place in the spring following the end of compulsory education, when members are aged 16 or 17 (depending on the date of their birthday). There are then usually two further surveys, Sweeps 2 and 3, which take place at yearly intervals.[3] In the report, we refer to young people at the Sweep 1 survey as 16/17 year olds, at the Sweep 2 survey as 17/18 year olds, and at the Sweep 3 survey as 18/19 year olds. The dates of the cohorts referred to in this report are given in Table 1.1, which also shows the number of respondents to the Sweep 1 survey and the response rate at Sweep 1.

In the earlier cohorts, data were collected entirely by means of self-completion postal questionnaires, though in more recent years these have been supplemented by telephone interviews with young people who failed to respond to the postal survey. As the table shows, overall response rates are not particularly high, and (as with surveys generally) have declined since the 1980s. Furthermore, the postal methodology together with the questionnaire's emphasis on education and training creates a response bias towards academically more able and motivated young people. However this bias is partially corrected by a sophisticated weighting matrix that ensures that the Sweep 1 sample is nationally representative in terms of sex, region, school type and GCSE results, and by further weighting processes at Sweeps 2 and 3 that correct for differential sample attrition. The appropriate weights are applied

[3] The second sweep survey at age 17/18 was omitted in YCS Cohorts 7 and 8, though there was a third sweep of YCS Cohort 8 at age 21/22.

TABLE 1.1
Dates, sample numbers and response for YCS Cohorts 4 to 10

	YCS Cohort:						
	4	5	6	7	8	9	10
Reached 16 in school year:	*1987/88*	*1989/90*	*1990/91*	*1992/93*	*1994/95*	*1996/97*	*1998/99*
Sweep 1 (age 16/17) spring:	1989	1991	1992	1994	1996	1998	2000
Sweep 2 (age 17/18) spring:	1990	1992	1993	-	-	1999	+
Sweep 3 (age 18/19) spring:	1991	1993	1994	1996	1998	2000	+
No. of Sweep 1 respondents	*14,116*	*14,511*	*24,922*	*18,021*	*15,899*	*14,662*	*13,698*
Response rate at Sweep 1[1]	71%	72%	69%	66%	65%	65%	55%

[1] This takes into account all sources of non-response, including wrong addresses.
- No survey.
+ Not yet available at the time of writing.

throughout this report, and unweighted sample numbers are usually reported alongside weighted sample numbers. Where figures refer to the whole cohort, weighted and unweighted sample numbers are identical.

Although the report shows trends at age 16/17 from YCS Cohort 4 onwards, it draws mainly on the two most recent cohorts, YCS 9 and 10.[4] At the time of writing, data are available for all three sweeps of YCS 9, but only for Sweep 1 of YCS 10. There were many changes to the design of the Sweep 1 questionnaire in YCS 10, which was longer and more complex than for previous cohorts. These changes were implemented because of a desire to meet requests for information on new topics, and because the contract for the fieldwork was awarded to a different company. Partly because of the extra length and complexity of the questionnaire, the response rate dropped to 55%, ten percentage points below the response rate at Sweep 1 of YCS 9, and it seems likely that response bias was increased as a result.[5] This created a degree of discontinuity between YCS 9 and 10, because although response bias can be reduced by weighting, it is unlikely to be completely eliminated. Further discontinuities were created by changes in question wording and order, and by differences in editing and coding procedures. These problems are discussed in more detail in the sections of the report where they are most relevant.

[4] Full details of the methodology used for YCS 9 and 10 can be found in National Centre for Social Research (1999), RSGB (2000), RSBG (2001a) and RSGB (2001b).
[5] Increased response bias can be inferred from the overall range of weights, which is wider in YCS 10 than YCS 9 (0.50 to 2.97 in YCS 10 compared to 0.62 to 2.57 in YCS 9), and from the mean weighting factors for groups which typically have below average levels of response, which are greater in YCS 10 than YCS 9. For example, for males the mean weight is 1.07 in YCS 9 and 1.10 in YCS 10, for young people in the bottom third of GCSE results the mean weight is 1.42 in YCS 9 and 1.56 in YCS 10, and for persistent truants the mean weight is 1.26 in YCS 9 and 1.43 in YCS 10.

TABLE 1.2
Sample numbers and response for YCS Cohort 9 Sweeps 1, 2 and 3

	Full sample	In full-time education at Sweep 1
Number of names and addresses issued at Sweep 1 (Spring 1998)	22,498	-
Total number of responses to Sweep 1	14,662	-
Response rate at Sweep 1	65%	-
Number of names and addresses issued at Sweep 2 (Spring 1999)	14,662	11,086
Total number of responses to Sweep 2	9,710	8,132
Response rate at Sweep 2	66%	73%
Sweep 2 response as % of the original Sweep 1 issued sample	43%	-
Number of names and addresses issued at Sweep 3 (Spring 2000)	9,710	8,132
Total number of responses to Sweep 3	6,304	5,440
Response rate at Sweep 3	65%	67%
Sweep 3 response as % of the original Sweep 1 issued sample	28%	-

Sample numbers and response rates for all three sweeps of YCS 9 are given in Table 1.2. At the second and third sweeps, only those who responded to the previous sweep were re-contacted. Thus although the response rate at later sweeps was similar to the response rate at Sweep 1, the cumulative effect of sample attrition was to reduce response at Sweep 2 to 43% of the original sample selected, and at Sweep 3 to just 28% of the original sample. Though attrition of this size is obviously undesirable, it is less problematic in the present study than it would be in a study of, for example, unemployed young people. Young people who stay on in full-time education are amongst those most likely to respond to YCS, and, as Table 1.2 shows, the response rate for cohort members who were in full-time education at Sweep 1 was seven percentage points greater at Sweep 2 and two percentage points greater at Sweep 3 than for the cohort as a whole.[6] As a result, in many subgroups the unweighted sample numbers on which the tables and graphs in this report are based are greater than the weighted sample numbers.

Structure of the report

The following chapter looks at recent changes in the overall pattern of young people's activities in the first year after the end of compulsory schooling, and at an important factor behind these changes, namely the steady increase in levels of attainment in

[6] The reason why the difference in response rates between the two groups was narrower at Sweep 3 than at Sweep 2 was probably that some cohort members who stayed on in full-time education after 16 took the third post-compulsory year as a 'gap' year between A levels and university, and so were harder to contact at Sweep 3 than at Sweep 2.

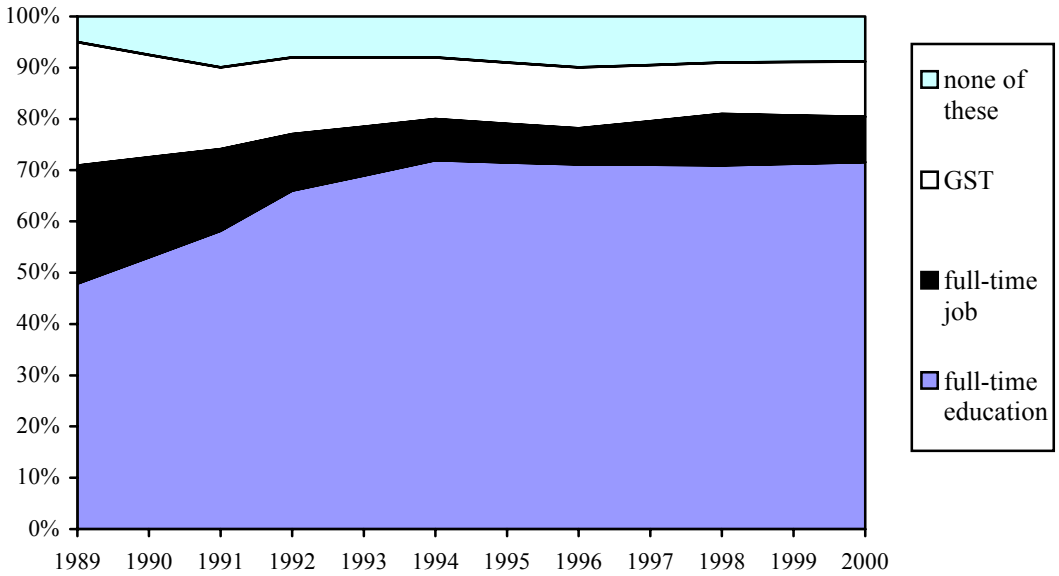
public examinations at age 16. Chapter 3 explores group differences in the probability of staying on in post-compulsory full-time education, showing how these group differences relate to Year 11 GCSE results. Chapter 4 deals with the choice between academic and vocational qualifications and between school sixth forms, sixth form colleges and colleges of Further Education (FE). This chapter again focuses on differences between groups of young people and how these relate to attainment in Year 11 GCSEs. Chapter 5 looks at how many young people continue in full-time education into a second post-compulsory year and investigates the factors that encourage this. It also takes a brief look at young people who leave full-time education at age16 but return during the next two or three years. The final chapter highlights the most important findings and considers some of their implications.

2 TRENDS AT AGE 16

Participation in education and training

Between the late 1980s and the mid 1990s there was a big growth in the proportion of young people in England and Wales who stayed on in full-time education after age 16. This was triggered by a combination of events that occurred around that time: the launch of GCSE examinations and a consequent rise in success rates in public examinations at 16, the introduction of new vocational qualifications for 16-18 year olds, the loss of many jobs for 16 year olds in traditional manufacturing industries, the withdrawal of social security benefits for most under-18s, and changes in the system of funding for schools, sixth form colleges and FE colleges that encouraged institutions to compete for pupils.

Chart 2.1
Main activities of 16/17 year olds, 1989-2000 (YCS 4-10)



Weighted base Ns *(estimates for other years interpolated):*

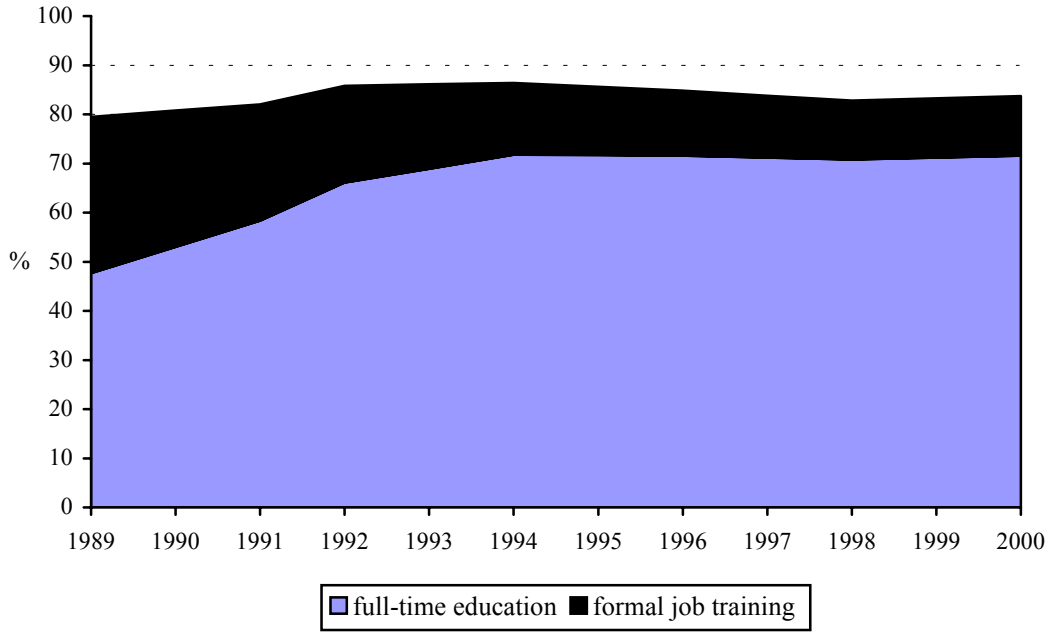
1989	*1991*	*1992*	*1994*	*1996*	*1998*	*2000*
YCS 4	*YCS 5*	*YCS 6*	*YCS 7*	*YCS 8*	*YCS 9*	*YCS 10*
14,116	*14,511*	*24,922*	*18,021*	*15,899*	*14,640*	*13,622*

As Chart 2.1 shows, the growth in staying on rates was matched by falls in the proportion of young people who went straight into full-time jobs or entered government-supported training (GST). There was no drop in the proportion of the age

group with no full-time place in education, employment or training. After the mid-1990s, educational participation dipped slightly, and though it has since recovered, it has not yet regained its earlier high point.[7]

To a certain extent, these changes represented a shift of vocational education from the workplace to the classroom. Alongside the growth in educational participation has been a decline in formal work-based vocational training, defined here to include GST of all kinds, apprenticeships outside the GST structure, and any other off-the-job training undertaken in the course of a job that was not an apprenticeship or part of GST. Thus, as Chart 2.2 shows, the rise in the early 1990s in the total proportion of the age group in either full-time education or formal job training was much smaller than the rise in educational participation alone. Indeed, this proportion has fallen from its mid-1990s peak.

Chart 2.2
Proportion of 16/17 year olds in full-time education and formal job training, 1989-2000 (YCS 4-10)



Notes: *Base Ns as for Chart 2.1. The proportion in formal job training in 2000 may be slightly underestimated because of changes to the YCS 10 questionnaire.*

Trends in GCSE results

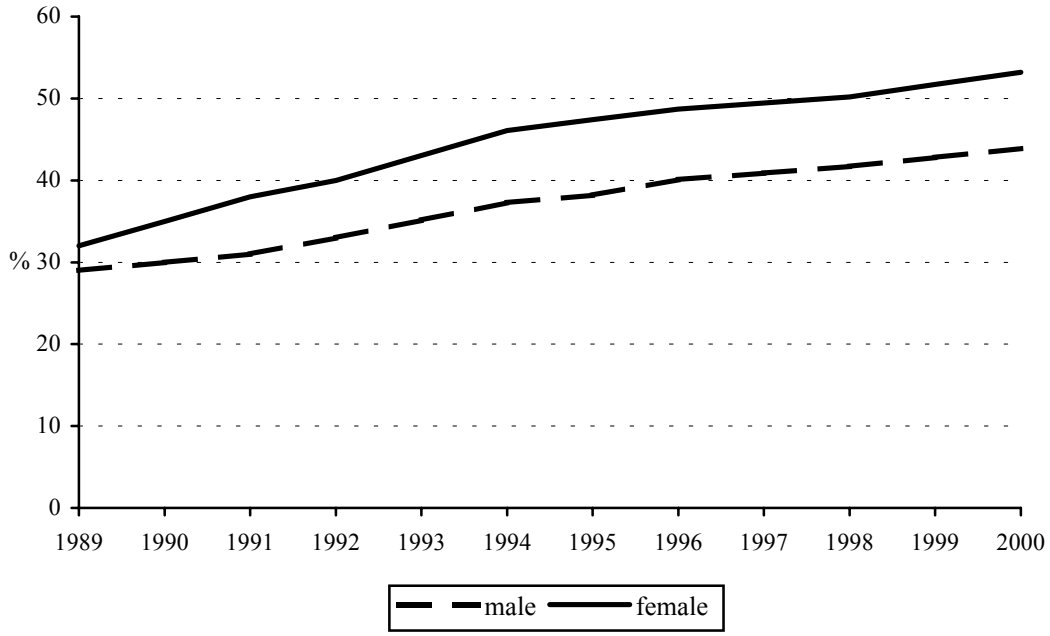
Obviously, young people with good GCSE results are much more likely to stay on in full-time education after age 16 than those with poor results. Five or more A-C

[7] See Appendix 1 for details of how the proportion of young people in full-time education is calculated in Chart 1, and how these estimates compare with official DfES figures for England.

grades at GCSE is the usual requirement for entry to A level courses and is used as a standard performance indicator for examination results in schools.[8] In spring 2000 (YCS 10), 90% of 16/17 year olds with five or more GCSE A-C grades were in full-time education, compared to 54% of 16/17 year olds with less than five A-C grades. Thus one of the factors that pushed up staying on rates in the early 1990s was the improvement in examination results at age 16 following the replacement of separate GCE O Level and CSE examinations with GCSEs.

Chart 2.3 shows that the proportion of young people getting five or more GCSE A-C grades increased very quickly during the period from the late 1980s to mid-1990s when staying-on rates in full-time education rose fastest. However GCSE results continued to improve, though at a slower rate, after staying-on rates had levelled off. Note also the pronounced sex difference in results, with girls achieving on average better GCSEs than boys over the whole period. This sex gap in results widened in the early 1990s, and so far shows no sign of narrowing again.

Chart 2.3
Proportion of 16/17 year olds with 5+ GCSE A-C grades, by sex:
YCS 4 - YCS 10



Weighted base Ns *(estimates for other years interpolated):*

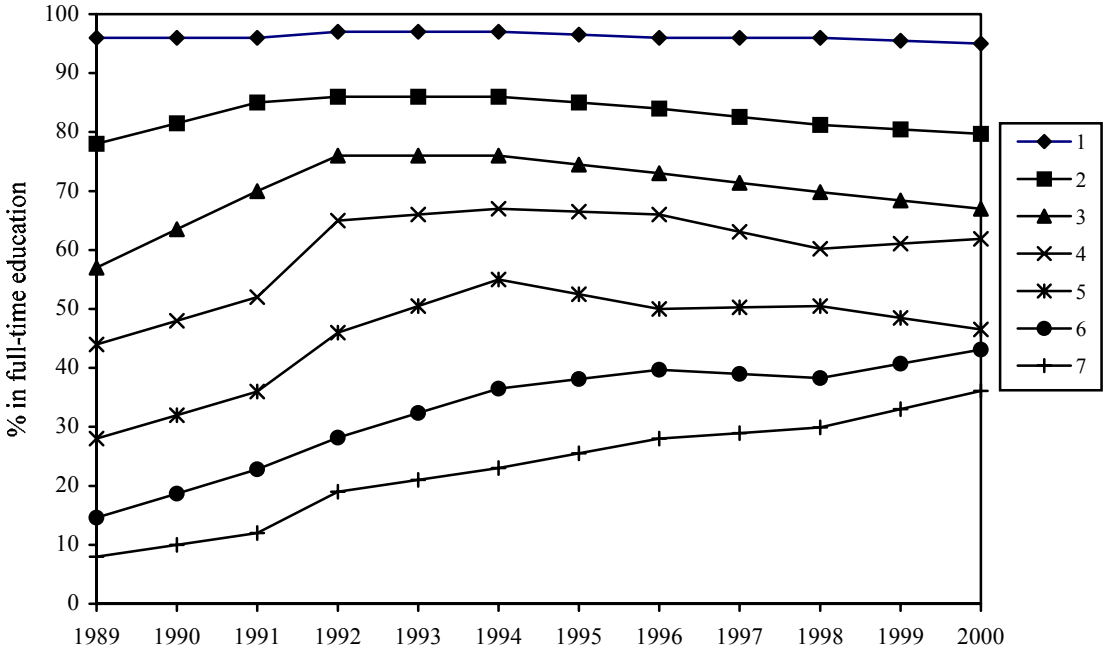
	1989 YCS 4	*1991 YCS 5*	*1992 YCS 6*	*1994 YCS 7*	*1996 YCS 8*	*1998 YCS 9*	*2000 YCS 10*
Males	*7,227*	*7,410*	*12,726*	*9,197*	*8,082*	*7,381*	*6,887*
Females	*6,889*	*7,101*	*12,197*	*8,824*	*7,817*	*7,259*	*6,733*

[8] YCS does not distinguish A and A* grades.

Trends in staying on rates by GCSE results

Trends over time in staying on rates in full-time education have been very different for young people with different levels of achievement at GCSE. Chart 2.4 shows that rates have risen most for those with poor GCSE results: the proportion of 16/17 year olds with no reported GCSE passes who were still in full-time education increased from less than one in ten in 1989 to more than one in three in 2000, and amongst those with between one and five passes it rose from fewer than one in six to more than two in five. Apart from a temporary levelling off in the late 1990s, this growth continued throughout the period.

Chart 2.4
Participation in full-time education at age 16/17
by Year 11 GCSE results band, Spring 1989-Spring 2000



Key to GCSE results bands: 1: 8+ A-C 2: 5-7 A-C 3: 5+A-G including 3-4 A-C 4: 5+ A-G including 1-2 A-C 5: 5+ D-G 6: 1-4 passes 7: no passes reported
Weighted base Ns *(estimates for other years interpolated)*

	GCSE results band						
	1	*2*	*3*	*4*	*5*	*6*	*7*
1989 (YCS 4)	*1,960*	*2,343*	*1,536*	*2,276*	*2,646*	*1,990*	*1,365*
1991 (YCS 5)	*2,575*	*2,427*	*1,845*	*2,362*	*2,364*	*1,832*	*1,106*
1992 (YCS 6)	*5,418*	*3,712*	*3,321*	*3,851*	*4,322*	*2,486*	*1,813*
1994 (YCS 7)	*4,797*	*2,700*	*2,251*	*2,606*	*3,125*	*1,498*	*1,044*
1996 (YCS 8)	*4,933*	*2,113*	*1,933*	*2,206*	*2,795*	*899*	*1,020*
1998 (YCS 9)	*4,619*	*2,106*	*1,648*	*1,959*	*2,523*	*892*	*890*
2000 (YCS 10)	*4,634*	*2,006*	*1,550*	*1,811*	*2,320*	*671*	*629*

In contrast, although young people with very good GCSE results (eight or more A-C grades) had very high staying on rates throughout, across the period as a whole their participation rates declined by one percentage point, from 96% to 95%. For this

group, rates peaked in the first half of the 1990s and have declined slightly since. For the two results bands below this, participation rates initially rose very fast, but levelled out out in the early 1990s and fell during the second half of the decade. Across the whole period, the participation rates of young people with between five and seven A-C grades rose by just two percentage points, from 78% to 80%, while the participation rates of those with three or four A-C grades but five or more passes in total rose by ten percentage points (57% to 67%). Trends in the remaining two middle results bands have been a little more erratic, but also show the greatest rise during the late 1980s and early 1990s, a levelling off or a peaking in the mid 1990s, and some subsequent decline.

Table 2.1
Year 11 GCSE results of 16/17 year olds in full-time education: 1989-2000 (YCS 4-10)

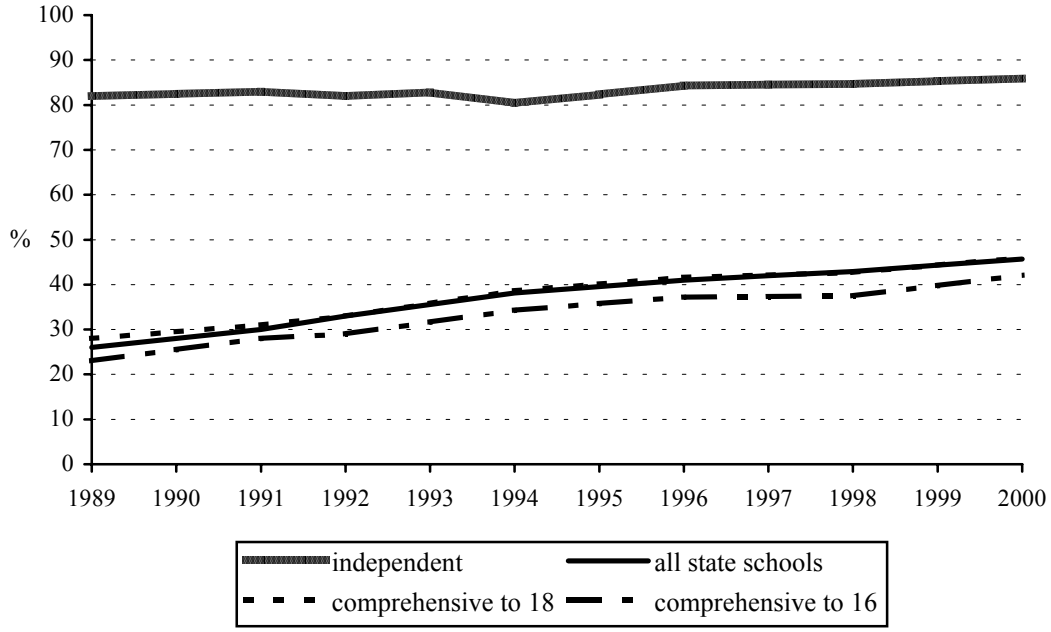
	Age 16-17 in spring:						
	1989 YCS 4 %	1991 YCS 5 %	1992 YCS 6 %	1994 YCS 7 %	1996 YCS 8 %	1998 YCS 9 %	2000 YCS 10 %
5+ grades A-C	55	53	51	54	57	59	61
of which:							
8+ A-C grades	*28*	*29*	*32*	*36*	*41*	*43*	*45*
5-7 A-C grades	*27*	*24*	*19*	*18*	*16*	*17*	*16*
5+ grades A-G inc. 1-4 A-C	28	30	30	27	25	23	22
less than this	17	17	18	19	18	18	16
Total	100	100	100	100	100	100	100
Weighted N	*6,728*	*8,489*	*16,471*	*12,941*	*11,391*	*10,359*	*9,753*

Despite the fact that growth in staying on rates has been fastest amongst young people with poor GCSE results, the overall improvement in results has been big enough to produce a rise in average levels of GCSE attainment amongst Year 12 students. Table 2.1 shows that in 2000, 61% of 16/17 year olds in full-time education had five or more A-C grades compared to 55% in 1989. Even more conspicuous has been the growth in the proportion of students with eight or more A-C grades, which rose from 28% to 45% over the period.

Trends in GCSE results by school type

As GCSE results are key to understanding the paths that young people take through post-compulsory education, we take a little more time to look at trends in results across different groups of young people. One amongst many factors that relate strongly to GCSE performance is the type of secondary school attended. Chart 2.5 shows that in the first half of the 1990s, the increase in the proportion of young people

Chart 2.5
Proportion of 16/17 year olds with 5+ GCSE A-C grades, by type of school attended in Year 11, YCS 4 - YCS 10



Weighted base Ns: *(figures for other years interpolated)*

	1989 YCS 4	*1991 YCS 5*	*1992 YCS 6*	*1994 YCS 7*	*1996 YCS 8*	*1998 YCS 9*	*2000 YCS 10*
independent	*1,036*	*1,088*	*1,982*	*1,516*	*1,201*	*1,044*	*940*
all state sector	*13,080*	*13,423*	*22,941*	*16,462*	*14,673*	*13,618*	*12,720*
comprehensive to 18	*8,151*	*7,792*	*12,904*	*9,299*	*7,709*	*6,171*	*6,638*
comprehensive to 16	*3,925*	*4,550*	*8,086*	*5,964*	*5,841*	*4,325*	*4,569*

Note: *'All state sector' includes grammar and secondary modern schools as well as comprehensives.*

gaining five or more A-C grades was confined to state schools. In independent schools this proportion already stood at over 80%, and it remained roughly constant, so that the gap between state and independent schools narrowed considerably. Since the mid-1990s, however, results in independent schools have improved by almost as much as in state schools. Chart 2.5 also shows that comprehensive schools with sixth forms tend to have better GCSE results than comprehensive schools without sixth forms, with a difference of about four percentage points in the proportion getting five or more A-C grades. This difference remained constant throughout the 1990s.

Trends in GCSE results by ethnic group

There is considerable variation between different ethnic minority groups in average levels of GCSE performance, with some groups tending to do worse than young white people and others tending to do better. This makes it unsatisfactory to aggregate all

Table 2.2
Mean total points score in Year 11 GCSEs, by ethnic group: YCS 9 and 10 combined

	mean	s.d.	Base N *weighted*	Base N *unweighted*
White	37.7	18.7	*24,636*	*24,924*
Black	31.2	17.0	*632*	*537*
Indian	41.4	17.1	*796*	*810*
Pakistani/Bangladeshi	30.5	16.8	*907*	*789*
Other/mixed	40.0	19.2	*802*	*798*

Note: *Total points score is calculated by allocating 7 for each A/A* grade, 6 for each B grade, and so on. All GCSEs gained by the end of Year 11 are counted, even if taken early.*

'non-whites' together, as if they formed a homogeneous group - particularly so because the composition of the ethnic minority sample in YCS varies from cohort to cohort.[9] Sample numbers in any single YCS cohort are too small to give reliable estimates of results in the smaller minority groups, so Table 2.2 combines data from YCS Cohorts 9 and 10. It shows that young people of Indian origin tended to do better in GCSEs than white students - they had a mean total GCSE points score of 41.4, compared to 37.7 for whites. In contrast, young black people and those of Pakistani or Bangladeshi origin tended to do worse than whites, with mean total points scores of 31.2 and 30.5 respectively. Young people of other ethnic origins (amongst whom the Chinese form an important group) also tended to do very well in GCSEs.

As time passes and immigrant groups become longer settled in the UK, it might be expected that any cultural and linguistic barriers to good GCSE results would diminish, reducing the advantage of the white majority over young black people and those of Pakistani/Bangladeshi origin. Conversely, it might be expected that young people from minority cultures that place a strong emphasis on academic education, like those of Indian origin, would become more likely to adopt the values of the majority population, and that their very good GCSE results would as a consequence fall to converge towards the national mean. However YCS gives no evidence of either of these trends.

We explore this issue by looking at the proportion of young people in each ethnic group who had GCSE results in the bottom third of the national distribution of total points score in Year 11 GCSEs.[10] As sample numbers for the smaller ethnic groups are too small to give reliable estimates of performance in any single cohort, Table 2.3

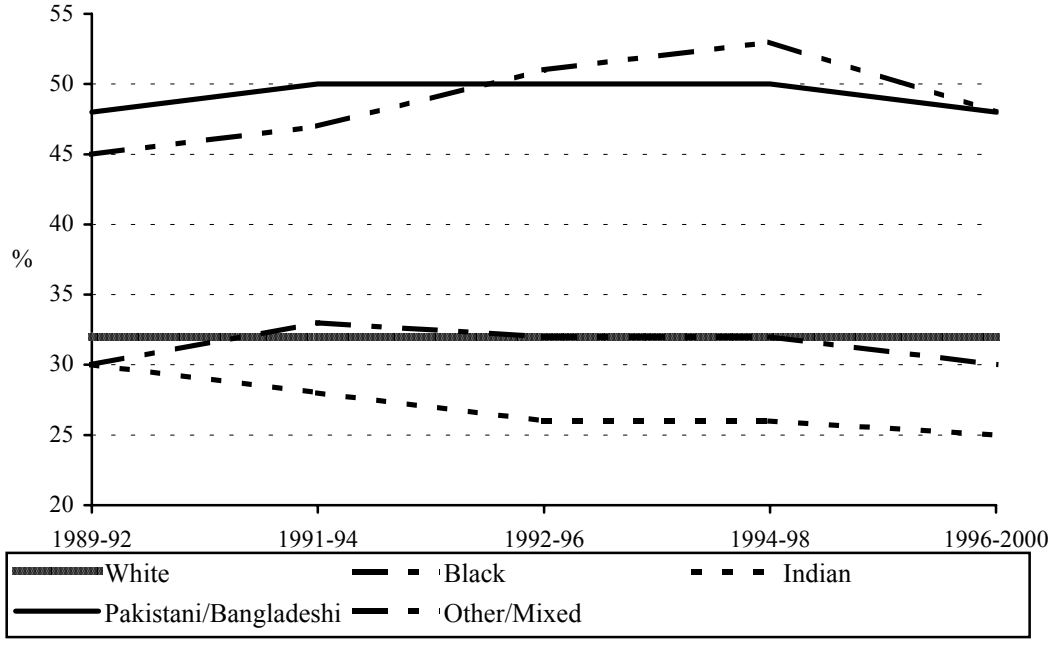
[9] As a (weighted) proportion of all ethnic minority respondents at Sweep 1 of YCS Cohorts 4-10, young black people formed from 16% to 29% in different cohorts, those of Indian origin formed from 23% to 36%, Pakistanis and Bangladeshis formed from 19% to 34% and other ethnic minority groups formed from 6% to 26%. This was presumably due to the chance composition of the sample, given that in England and Wales the ethnic minority population is highly concentrated in particular local areas and given also that ethnicity is not a factor in the YCS weighting matrix.

[10] See the note to Table 2.2 for an explanation of how total points score is calculated.

TABLE 2.3
Proportion of young people in the bottom third of the national distribution of Year 11 GCSE results by ethnic group, moving averages across three cohorts, 1989-2000 (YCS 4-10)

	YCS 4,5,6 (1989-92)	YCS 5,6.7 (1991-94)	YCS 6,7,8 (1992-96)	YCS 7,8,9 (1994-98)	YCS 8,9,10 (1996-2000)
White	**32**	**32**	**32**	**32**	**32**
Weighted base N	*49,198*	*52,081*	*52,997*	*43,092*	*38,816*
Unweighted base N	*49,336*	*52,247*	*53,143*	*43,347*	*39,013*
Black	**45**	**47**	**51**	**53**	**48**
Weighted base N	*838*	*910*	*1,003*	*850*	*915*
Unweighted base N	*806*	*932*	*1,011*	*808*	*779*
Indian	**30**	**28**	**26**	**26**	**25**
Weighted base N	*1,068*	*1,356*	*1,465*	*1,321*	*1,188*
Unweighted base N	*1,048*	*1,326*	*1,454*	*1,320*	*1,203*
Pakistani/Bangladeshi	**48**	**50**	**50**	**50**	**48**
Weighted base N	*962*	*1,405*	*1,536*	*1,486*	*1,387*
Unweighted base N	*930*	*1,273*	*1,400*	*1,302*	*1,216*
Other/mixed	**30**	**33**	**32**	**32**	**30**
Weighted base N	*452*	*686*	*838*	*1,141*	*1,165*
Unweighted base N	*448*	*742*	*915*	*1,212*	*1,179*

Chart 2.6
Proportion of 16/17 year olds in the bottom third of GCSE results, by ethnic group: YCS 4 - 10 (moving averages across cohorts)



Base Ns as in Table 2.3.

calculates moving averages across trios of adjacent cohorts, and Chart 2.6 shows these estimates graphically.

The analysis shows that over the period covered by the study, the proportion of young white people who had GCSE results in the bottom third of the national distribution remained constant, at 32%. This constancy is to be expected, given that whites formed the large majority of each cohort. However, for young black people, average performance got worse as the years went by. The proportion of young black people with results in the in the bottom third of the national distribution increased over the first four time points for which estimates are calculated from 45% (12 percentage points more than if their performance matched the national mean) to 53% (20 percentage points above the national mean). Only in YCS 10 did there appear to be any improvement in results for young black people, and as Chapter 1 explained, results for YCS Cohort 10 may not be entirely reliable.[11] For young people of Indian origin, in contrast, average performance improved over time, the proportion in the bottom third falling from 30% at the first time point to 25% at the last time point. Amongst the Pakistani/Bangladeshi group, there was no evidence of any consistent improvement over time. The proportion of Pakistani/Bangladeshi young people with results in the bottom third rose initially from 48% to 50%, where it stayed through most of the 1990s. It fell back again to 48% only at the last time point for which we have an estimate, and, as has already been noted, estimates for this last time point may not be wholly reliable.[12] The last group identified in the table and chart are young people who came from other ethnic groups or who were of mixed origin. Their position fluctuated more than that of other groups, perhaps because the ethnic composition of this group is likely to have varied from cohort to cohort.

[11] In YCS 10 the response bias towards high achieving young people was greater than in YCS 9, and this increased bias may not have been wholly corrected in all subgroups by the weighting matrix, which does not include ethnicity among the weighting factors.
[12] See footnote 5 above.

3 GROUP DIFFERENCES IN STAYING ON RATES

Introduction

Although GCSE results are probably the single biggest factor involved in the decision about whether to stay on in full-time education after age 16, they are by no means the only influence. Sex, ethnicity, the type of school attended and home background all play a part, together with peer group and local area effects. The independent role of a number of these factors was demonstrated in an earlier report in this series, which presented a statistical model of the staying-on decision, based on aggregated data from YCS Cohorts 4 to 8.[13] Although we now have more recent data, the pattern of these relationships is unlikely to have changed very much. Thus, rather than repeat that analysis, this chapter focuses on four key factors that affect young people's decisions, namely sex, region, ethnicity and home background. In order to give an indication of their importance, it charts the gap in staying on rates between groups defined by these factors that remains once differences GCSE results have been taken into account.

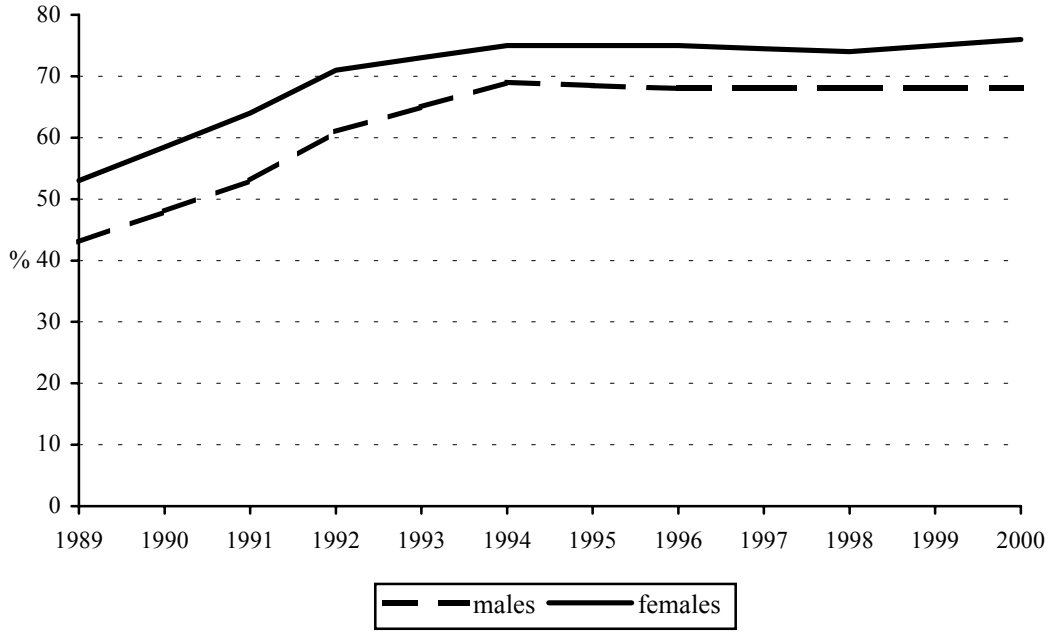
Differences between the sexes

Throughout the period covered by this study, young women have been consistently more likely than young men to stay on in full-time education after 16. As Chart 3.1 shows, participation rates at age 16/17 grew equally quickly for the two sexes between the late 1980s and early 1990s, though the gap between the sexes narrowed in the mid 1990s. Since then, participation rates for males have remained flat at 68% while rates for females have fluctuated around 75%. It is possible that the sex gap may have widened again slightly at the very end of the 1990s.

While males were less likely than females to stay in full-time education, they were more likely to take a full-time job or to enter GST. As Table 3.1 shows, this was a consistent pattern throughout the period . In contrast, females were a little more likely than males to have no full-time place in education, training or work, the difference being explained by their greater likelihood of having domestic caring responsibilities.

[13] Payne 1998, Table 5.1.

Chart 3.1
Proportion of 16/17 year olds in full-time education by sex, 1989-2000 (YCS 4-10)



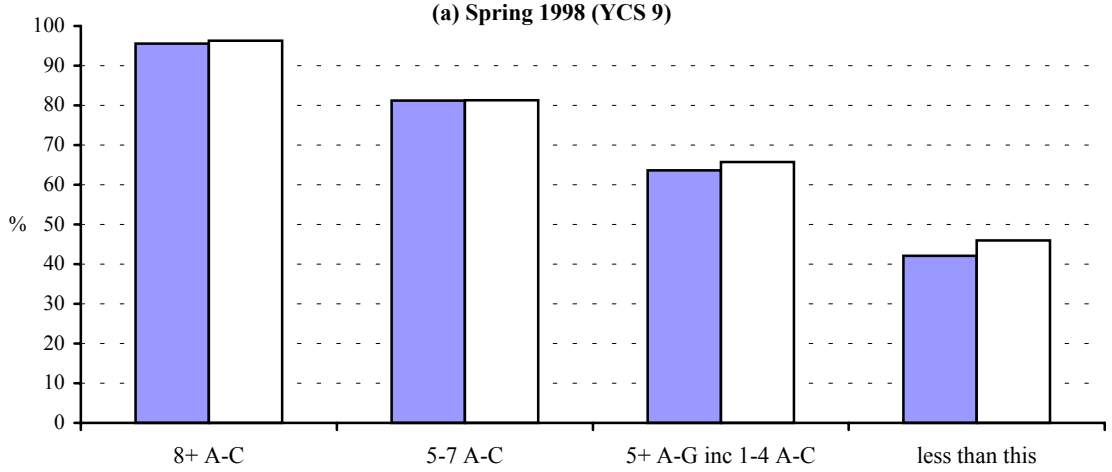
Note: *Weighted base Ns as in Table 3.1; figures for other years interpolated..*

TABLE 3.1
Major post-16 routes by sex: 1989-2000 (YCS 4-10)

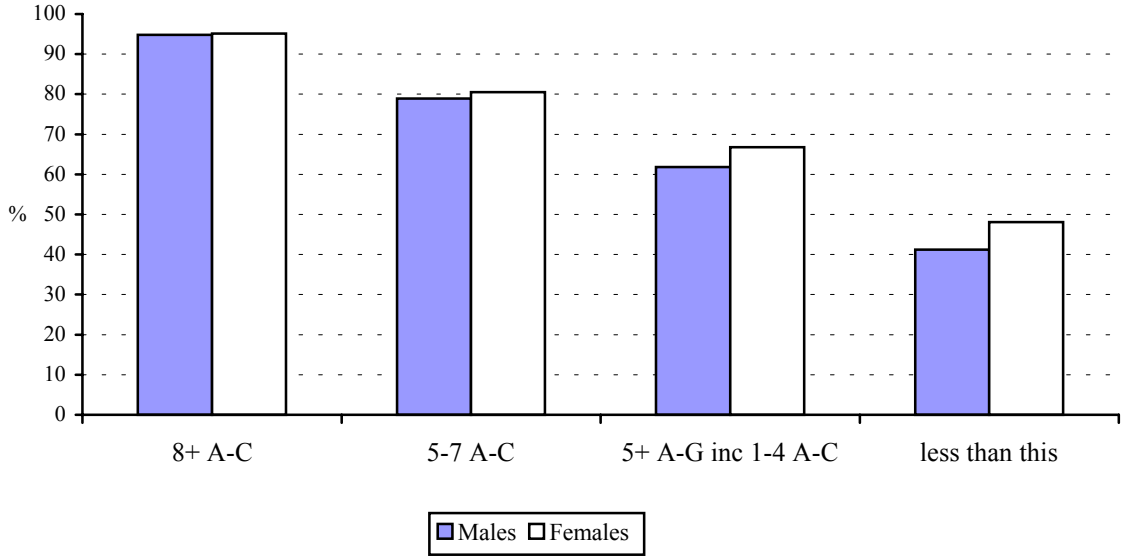
	Age 16-17 in spring:						
	1989 YCS 4 %	1991 YCS 5 %	1992 YCS 6 %	1994 YCS 7 %	1996 YCS 8 %	1998 YCS 9 %	2000 YCS 10 %
Males:							
full-time education	43	53	61	69	68	68	68
full-time job	25	19	13	9	9	12	11
GST	27	19	17	14	14	13	13
none of the above	5	9	9	8	9	8	8
Total	100	100	100	100	100	100	100
Weighted N	*7,227*	*7,410*	*12,726*	*9,197*	*8,082*	*7,381*	*6,887*
Females:							
full-time education	53	64	71	75	75	74	76
full-time job	20	13	8	6	6	8	7
GST	20	14	12	10	9	8	8
none of the above	7	10	9	9	10	10	9
Total	100	100	100	100	100	100	100
Weighted N	*6,889*	*7,101*	*12,197*	*8,824*	*7,817*	*7,259*	*6,733*

Chart 3.2
Percentage of 16/17 year olds in full-time education by sex and GCSE results

(a) Spring 1998 (YCS 9)



(b) Spring 2000 (YCS 10)



Base Ns	***YCS 9***				***YCS 10***			
	males		*females*		*males*		*females*	
	wtd	*unwtd*	*wtd*	*unwtd*	*wtd*	*unwtd*	*wtd*	*unwtd*
8+ A-C grades	*2,010*	*2,395*	*2,609*	*3,354*	*2,008*	*2,444*	*2,626*	*3,719*
5-7 A-C grades	*1,070*	*1,314*	*1,037*	*1,349*	*1,031*	*1,250*	*976*	*1,320*
5+ passes inc. 1-4 at A-C	*1,788*	*1,660*	*1,819*	*1,851*	*1,722*	*1,410*	*1,639*	*1,489*
less than this	*2,513*	*1,510*	*1,794*	*1,210*	*2,127*	*1,109*	*1,494*	*898*

Chart 3.2 shows that for young people with five or more A-C grades at GCSE the sex difference in staying on rates was quite small, while for those with fewer good grades it was more marked, and increased as results got poorer. This pattern was found in both YCS 9 and 10, and in earlier YCS cohorts.[14] It probably reflects the gendered nature of the labour market for young people, and the fact that young men who were not academically inclined had the option of entering traditional craft apprenticeships where few young women were found, and had a better chance of getting work-based training. Recent analysis of YCS Cohort 9 has shown that, among young people in jobs or GST at age 16/17, 18% of males had received off-the-job training in the previous four weeks compared to 14% of females, and 42% of males had received on-the-job training in the previous four weeks compared to 35% of females.[15]

Region

Regional differences in staying on rates in full-time education are very substantial and have persisted for many years. YCS sample numbers within the smaller regions make it inevitable that estimates will fluctuate from year to year, so Chart 3.3 presents data from both YCS 9 and YCS 10. In YCS Cohort 10 (spring 2000) there was a difference of 15 percentage points between London, where 80% of 16/17 year olds were in full-time education, and the North East, where only 65% were in full-time education. In YCS Cohort 9 (spring 1998) regional differences were at least as wide.[16]

There was also a marked contrast between regions in both YCS 9 and YCS 10 in the proportion of 16/17 year olds in GST. In general, regions with very low staying on rates in full-time education had had high proportions of young people entering GST, and regions with very high staying on rates had low proportions in GST.

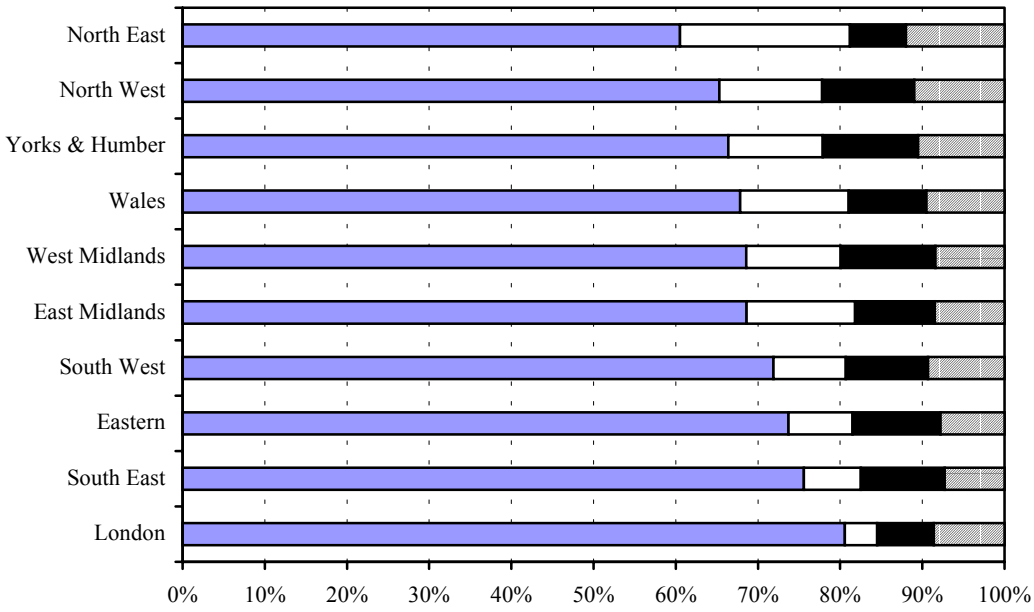
Regional variations in participation in full-time education were of course partly due to regional differences in GCSE results, which, as Table 3.2 shows, they broadly reflected. In YCS 10 there was a gap of five or six points - equivalent to a pass with a C or a B grade - between the regions with the highest GCSE results (the South East, Outer London and the South West) and the regions with the lowest (the North East, Yorkshire and Humberside, and Wales). However the statistical model referred to at

[14] See, for example, Payne 1998, Chart 3.3.
[15] Payne 2000, Table 3.9
[16] YCS Cohort 9 over-estimated participation in full-time education in London, but official estimates of participation at age 16 by region in 1997/98 still show a gap of 15 percentage points between the regions with the highest level of participation (London and the South East, with 75%) and the region with the lowest level of participation (the North East, with 60%). See the Appendix for more details. (At the time of writing, official estimates of participation by region for 1999/2000 are not available.)

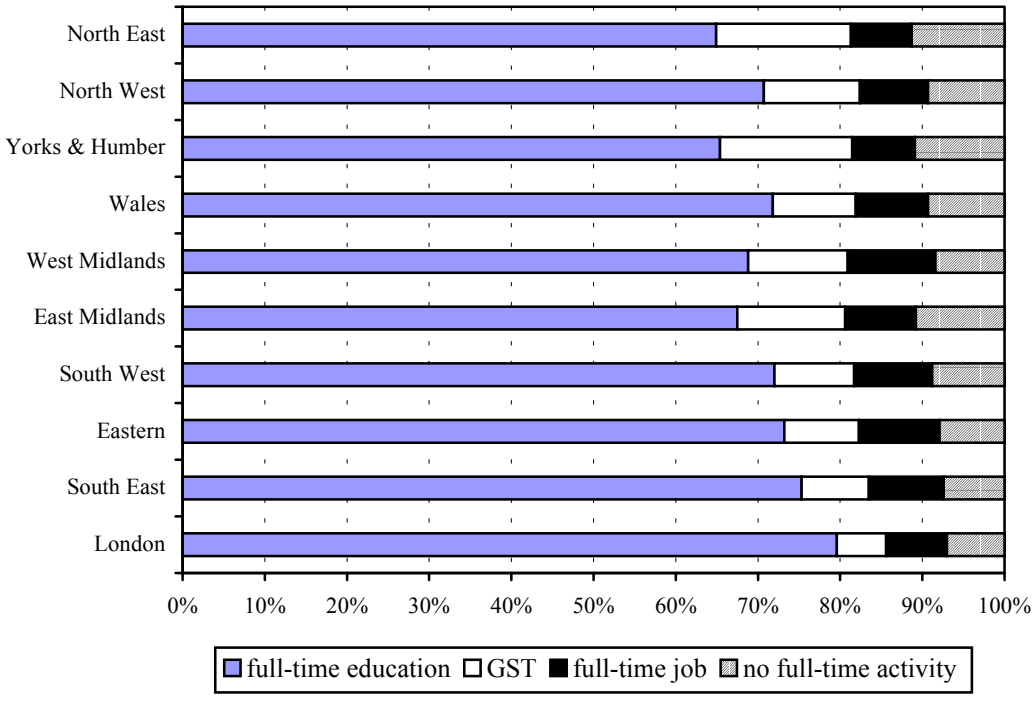
the start of this chapter showed that highly significant differences in staying on rates remained between regions, even after differences in young people's GCSE results had

Chart 3.3
Regional differences in activities at age 16/17

(a) Spring 1998 (YCS 9)



(b) Spring 2000 (YCS 10)



Base Ns on next page...

Base Ns for Chart 3.3

	YCS 9		*YCS 10*	
	weighted	*unweighted*	*weighted*	*unweighted*
North East	*810*	*868*	*706*	*730*
North West	*1,988*	*1,936*	*1,901*	*1,873*
Yorks & Humber	*1,424*	*1,253*	*1,347*	*1,326*
Wales	*812*	*897*	*794*	*788*
West Midlands	*1,576*	*1,592*	*1,470*	*1,445*
East Midlands	*1,170*	*1,135*	*1,106*	*1,140*
South West	*1,365*	*1,421*	*1,241*	*1,348*
Eastern	*1,535*	*1,607*	*1,387*	*1,462*
South East	*2,258*	*2,363*	*2,042*	*2,139*
London	*1,701*	*1,571*	*1,627*	*1,388*

TABLE 3.2
Means points score in Year 11 GCSEs by region, YCS 10 (spring 2000)

	mean	s.d.	*weighted N*	*unweighted N*
North East	35.3	18.3	*708*	*732*
North West	36.8	18.6	*1,914*	*1,884*
Yorks & Humber	35.1	18.5	*1,354*	*1,330*
Wales	34.9	21.6	*797*	*791*
West Midlands	37.1	18.5	*1,473*	*1,449*
East Midlands	37.7	18.2	*1,107*	*1,141*
South West	40.4	18.8	*1,247*	*1,354*
Eastern	39.6	18.8	*1,397*	*1,472*
South East	40.8	19.1	*2,055*	*2,150*
London	39.3	19.4	*1,638*	*1,395*
including:				
Inner London	37.2	18.6	*535*	*405*
Outer London	40.3	19.6	*1,103*	*990*

been taken into account along with differences in home background, ethnicity and several other relevant factors.[17] That model also suggested that when participation rates rose so dramatically in early 1990s, regional differences widened, though they later returned to their earlier levels.[18]

Table 3.3 shows the size of the regional differences in staying on rates that remain after allowing for differences in GCSE results. It divides young people into three groups according to their position in the national distribution of GCSE results (calculated from their total GCSE points score), aggregating data from YCS 9 and 10 in order to get large enough sample numbers in each subgroup.[19] The table shows that although regional differences are still found amongst young people in the top third of

[17] Payne 1998, Table 5.1.
[18] The model used standard statistical regions. In YCS Cohort 10, standard statistical region was not coded, and so Chart 3.3 and Table 3.2 are based on government office regions, which are slightly different.
[19] See the note to Table 2.2 for how total GCSE points score is calculated.

TABLE 3.3
Proportion of 16/17 year olds in full-time education, by region and Year 11 GCSE results, YCS 9 and 10 combined (spring 1998 and 2000)

	GCSE results band: Top third	Middle third	Bottom third
North East			
% in full-time education	**94**	**67**	**39**
Weighted base N	*405*	*477*	*633*
Unweighted base N	*550*	*564*	*484*
North West			
% in full-time education	**94**	**66**	**46**
Weighted base N	*1,258*	*1,252*	*1,379*
Unweighted base N	*1,616*	*1,285*	*895*
Yorks & Humber			
% in full-time education	**93**	**70**	**42**
Weighted base N	*799*	*905*	*1,067*
Unweighted base N	*956*	*898*	*725*
Wales			
% in full-time education	**94**	**74**	**46**
Weighted base N	*522*	*468*	*616*
Unweighted base N	*717*	*541*	*427*
West Midlands			
% in full-time education	**95**	**72**	**44**
Weighted base N	*918*	*1,032*	*1,097*
Unweighted base N	*1,203*	*1,099*	*735*
East Midlands			
% in full-time education	**94**	**71**	**38**
Weighted base N	*742*	*787*	*748*
Unweighted base N	*944*	*819*	*512*
South West			
% in full-time education	**95**	**72**	**47**
Weighted base N	*992*	*866*	*1,155*
Unweighted base N	*1,288*	*943*	*753*
Eastern			
% in full-time education	**95**	**74**	**46**
Weighted base N	*1,074*	*1,002*	*845*
Unweighted base N	*1,407*	*1,063*	*599*
South East			
% in full-time education	**95**	**75**	**47**
Weighted base N	*1,690*	*1,454*	*1,155*
Unweighted base N	*2,242*	*1,507*	*753*
London			
% in full-time education	**97**	**83**	**59**
Weighted base N	*1,162*	*1,095*	*1,070*
Unweighted base N	*1,362*	*965*	*632*

results, they are much wider amongst young people in the middle and bottom thirds of results. For 16/17 year olds in the top third of GCSE results, the proportion in full-time education ranges from 93% in Yorkshire and Humberside to 97% in London, a gap of four percentage points. In the middle third of results, it ranges from 66% in full-time education in the North West to 83% in London, a gap of 17 percentage points. In the bottom third of results, the range runs from 38% in full-time education in the East Midlands to 59% in London, a gap of 21 percentage points.

Ethnic group

We saw in Chapter 2 that young people from certain ethnic minority backgrounds did on average much better in GCSEs than young white people, while members of other ethnic minority groups tended to do much worse. However all the minority ethnic groups that YCS sample numbers permit us to distinguish had much higher levels of educational participation than whites. Once more, we must combine data from YCS 9 and 10 in order to get adequate sample numbers. Table 3.4 shows that overall, 86% of 16/17 year olds from ethnic minority backgrounds were in full-time education compared to 69% of whites. Young people of Indian origin had the highest staying on rate at 92%, but young black people and those of Pakistani and Bangladeshi origin also had very high staying on rates of 84% and 81% respectively. Estimates calculated separately for the two YCS cohorts were very similar to each other.

TABLE 3.4
Percentage of 16/17 year olds in full-time education by ethnic group, YCS 9 and 10 combined (spring 1998 and 2000)

	% in full-time education	*Base N*	
		weighted	unweighted
White	69	*24,612*	*24,906*
Ethnic minority	86	*3,128*	*2,927*
of which:			
Black	84	*631*	*536*
Indian	92	*793*	*808*
Pakistani/Bangladeshi	81	*906*	*787*
other or mixed	87	*799*	*796*

Statistical modelling published elsewhere that controls for GCSE results along with other factors confirms the very strong propensity of young people from all ethnic minority backgrounds to continue in full-time education beyond the minimum leaving age.[20] Table 3.5 illustrates the importance of ethnicity, especially at the middle and lower levels of GCSE results. YCS sample numbers do not permit separate estimates by individual ethnic group for the top, middle and bottom thirds of GCSE results, so the table, which aggregates data from YCS 9 and 10, reports these figures for all ethnic minority young people taken together. It shows that, just as with sex and region, ethnicity made a much bigger difference amongst young people with poor GCSE results than amongst those with good results. Of particular note is the very high staying on rate for ethnic minority young people in the bottom third of GCSE results, which, at 73%, was higher than the average for the whole age group, whatever their GCSE results. It contrasts with a staying on rate of just 41% for white young

[20] Payne 1998, Table 5.1.

TABLE 3.5
Percentage of 16/17 year olds in full-time education by ethnic group and GCSE results band, YCS 9 and 10 combined (spring 1998 and 2000)

	White			*Ethnic minority*		
	% in full-time education	*Base N*		% in full-time education	*Base N*	
		wtd	*unwtd*		*wtd*	*unwtd*
Top 3rd of results	95	*8,529*	*11,009*	98	*938*	*1,158*
Middle 3rd of results	70	*8,132*	*8,499*	89	*1,061*	*1,048*
Bottom 3rd of results	41	*7,950*	*5,398*	73	*1,131*	*721*

people in the bottom third of GCSE results, making a gap of 32 percentage points between the two groups. Once again, estimates calculated separately from YCS 9 and YCS 10 were very similar to each other.

The reasons for the high participation rates of young people from ethnic minorities are likely to be complex and to differ between ethnic groups. Some ethnic groups, notably Indians and Chinese, traditionally place a very high value on academic education, and for most young people belonging to these groups, staying on is probably a very positive choice that reflects personal and family preferences and their high level of achievement in GCSEs.[21] For other ethnic groups, notably young blacks and people of Pakistani or Bangladeshi origin who on average have quite poor GCSE results, the decision to stay on may sometimes be a response to restricted opportunities in the youth labour market. An earlier analysis of YCS data suggested that young people from ethnic minorities who left full-time education at 16 were less likely than young white people to get a job, even after taking into account their GCSE results, home background and other relevant factors.[22]

Home background

Differences in young people's home backgrounds can be captured by a range of measures that emphasise different aspects but are correlated with each other. Here we focus on parental occupation, parental education and housing tenure. Information on parental characteristics in YCS is not particularly good, because it is not collected directly from the parents themselves but from their sons and daughters. This means that there are likely to be inaccuracies as well as a lot of missing information. Such data errors tend to obscure relationships between variables, and so in reality home

[21] See Chapter 2, Table 2.2.
[22] Payne 1998, Table 6.1.

TABLE 3.6
Percentage of 16/17 year olds in full-time education by parental occupation, parental qualifications and housing tenure, YCS 10 (spring 2000)

	% in full-time education	*Base N*	
		weighted	unweighted
Parental occupation			
higher (SOC 1-3)	82	*4,864*	*5,516*
middle (SOC 4-7)	69	*4,942*	*4,814*
lower (SOC 8-9)	60	*2,525*	*2,252*
Parental qualifications			
one or both has a degree	86	*2,838*	*1,909*
one or both has A levels	75	*3,337*	*2,035*
neither has degree or A levels	70	*5,372*	*5,903*
Housing tenure			
owner-occupied	77	*10,290*	*10,907*
rented	54	*2,853*	*2,314*

Note on definitions: Parental occupation is defined on the basis of the father's occupation, or the mother's if there is no information about the father. *Higher occupations:* SOC 1,2 & 3 (managers & administrators; professional; associate professional & technical). *Middle occupations:* SOC 4,5,6 & 7 (clerical & secretarial; craft & related; personal & protective service; sales). *Lower occupations:* SOC 8 & 9 (plant & machine operatives; unskilled occupations).

background may play a bigger role in young people's decisions about whether to stay in full-time education than the present analysis suggests.

Table 3.6 shows that differences in staying on rates between young people from more and less advantaged home backgrounds were substantial. Amongst 16/17 year olds with parents in higher level occupations (managers and administrators; professional; associate professional and technical), 82% were in full-time education in spring 2000, compared to 69% of 16/17 year olds with parents in middle level occupations (clerical and secretarial; craft and related; personal and protective service; sales) and 60% of 16/17 year olds with parents in lower level jobs (plant and machine operatives; unskilled occupations). Similarly, 86% of 16/17 year olds with parents who had a degree were in full-time education compared to 75% of young people with parents who had A levels but not a degree and 70% of young people with parents who had neither a degree nor A levels. Finally, 77% of 16/17 year olds living in owner-occupied housing were in full-time education compared to just 54% of those living in rented accommodation.

These differences between young people from different home backgrounds are partly explained by group differences in GCSE results, which were large, as Table 3.7 shows. Between the children of semi-skilled and unskilled manual workers and the children of managers and administrators, professional, associate professional and technical workers there was a difference in mean GCSE points score equivalent to three passes at grade C. The difference in mean points score was nearly as wide

TABLE 3.7
Mean points score in Year 11 GCSEs by home background, YCS 10 (spring 2000)

	mean	s.d.	*weighted N*	*unweighted N*
Parental occupation				
higher (SOC 1-3)	46.3	17.7	*4,867*	*5,518*
middle (SOC 4-7)	36.8	17.8	*4,945*	*4,817*
lower (SOC 8-9)	31.4	17.1	*2,532*	*2,257*
Parental qualifications				
one or both has a degree	48.9	18.0	*2,840*	*3,339*
one or both has A levels	42.0	17.4	*1,908*	*2,035*
neither has degree or A levels	36.6	17.9	*6,035*	*5,908*
Housing tenure				
owner-occupied	41.7	18.1	*10,299*	*10,914*
rented	27.1	16.9	*2,858*	*2,317*

TABLE 3.8
Percentage of 16/17 year olds in full-time education by parental qualifications and GCSE results band, YCS 9 (spring 1998) and YCS 10 (spring 2000)

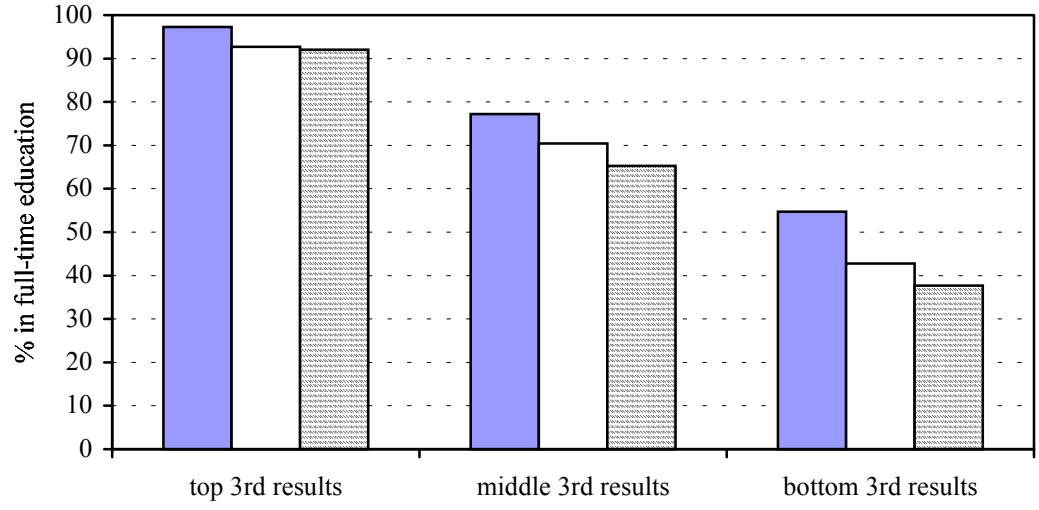
	YCS 9			***YCS 10***		
	% in full-time education	*Base N*		% in full-time education	*Base N*	
		wtd	*unwtd*		*wtd*	*unwtd*
Top 3rd of results						
One/both parents with degree	97	*2,627*	*3,245*	96	*2,460*	*3,303*
Neither parent has degree	93	*2,004*	*2,523*	94	*1,772*	*2,330*
Middle 3rd of results						
One/both parents with degree	77	*1,435*	*1,534*	75	*1,427*	*1,523*
Neither parent has degree	72	*2,443*	*2,576*	74	*2,169*	*2,230*
Bottom 3rd of results						
One/both parents with degree	47	*945*	*655*	50	*859*	*546*
Neither parent has degree	44	*2,505*	*1,767*	46	*2,088*	*1,343*

between the children of parents who had degrees and the children of parents with neither a degree not A levels, and between young people living in owner-occupied housing and those living in rented accommodation.

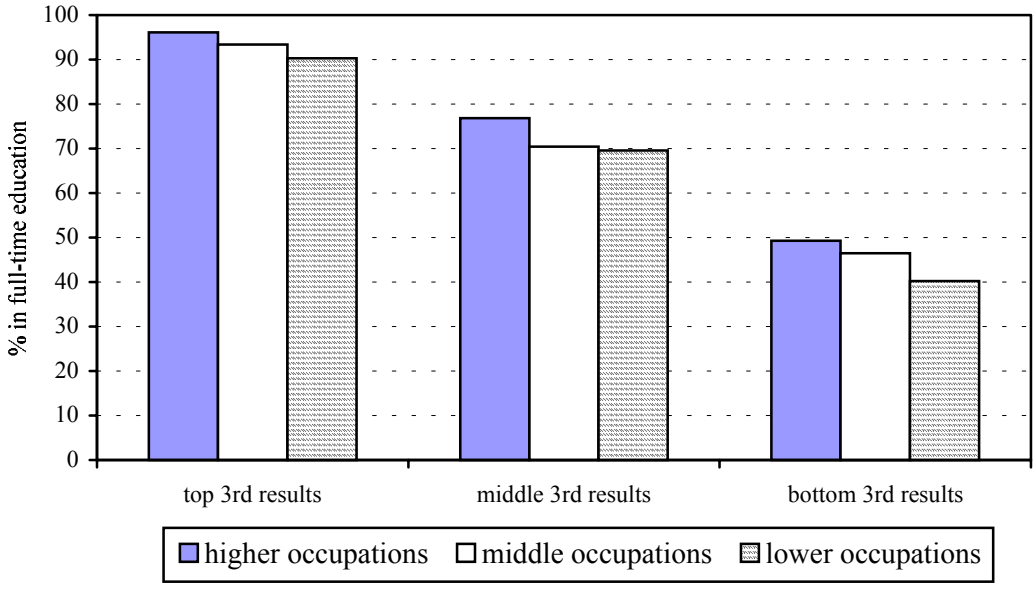
However, home background continued to make a difference to whether or not young people stayed on in full-time education, even after GCSE results had been taken into account. In the statistical model already referred to, parental occupation, father's qualifications and mother's qualifications all had large and highly significant effects independently of the other variables included in the model. Because of small sample numbers in some subgroups, Chart 3.4 gives data from both YCS 9 and YCS 10. It shows that, as with the other factors examined in this chapter, parental occupation had more of an effect on the probability of staying on for young people with poor GCSE

Chart 3.4
Percentage in full-time education at age 16/17 by parental occupation and GCSE results band

(a) Spring 1998 (YCS 9)



(b) Spring 2000 (YCS 10)



Note: See note to Table 3.6. For base Ns, see next page.

Base Ns for Chart 3.4

		GCSE results band: top 3rd		middle 3rd		bottom 3rd	
		wtd	*unwtd*	*wtd*	*unwtd*	*wtd*	*unwtd*
YCS 9:	*higher occupations*	*2,631*	*3,254*	*1,399*	*1,494*	*746*	*516*
	middle occupations	*1,581*	*1,987*	*2,019*	*2,124*	*1,895*	*1,345*
	lower occupations	*488*	*620*	*870*	*903*	*1,301*	*917*
YCS 10:							
	higher occupations	*2,527*	*3,384*	*1,524*	*1,607*	*812*	*525*
	middle occupations	*1,456*	*1,918*	*1,776*	*1,808*	*1,711*	*1,088*
	lower occupations	*453*	*591*	*919*	*923*	*1,152*	*738*

TABLE 3.9
Percentage of 16/17 year olds in full-time education by housing tenure and GCSE results band, YCS 9 (spring 1998) and YCS 10 (spring 2000)

	YCS 9			***YCS 10***		
	% in full-time education	*Base N*		% in full-time education	*Base N*	
		wtd	*unwtd*		*wtd*	*unwtd*
Top 3rd of results						
Owner-occupied	96	*4,503*	*5,614*	95	*4,186*	*5,566*
Rented	89	*345*	*426*	88	*344*	*447*
Middle 3rd of results						
Owner-occupied	74	*3,746*	*3,962*	74	*3,539*	*3,690*
Rented	65	*859*	*877*	66	*884*	*846*
Bottom 3rd of results						
Owner-occupied	47	*2,986*	*2,086*	49	*2,563*	*1,651*
Rented	41	*1,678*	*1,202*	41	*1,624*	*1,021*

results than for young people with good results. Tables 3.8 and 3.9 report the corresponding breakdowns for parental qualifications and housing tenure. In these cases also, young people in the less advantaged groups were less likely than others to stay in full-time education regardless of their GCSE results, though the pattern of bigger effects for those with poor GCSE results was not found.

The academic literature of the past half century has measured and commented on the gaps between the educational achievement and participation of young people from different home backgrounds, and a wide range of theories have been put forward to explain them. As with differences between ethnic groups, the causes are probably complex, and no single explanatory theory is likely to be adequate by itself. When thinking specifically of the decision to stay on in full-time education after 16, parents are more likely to encourage their children to stay on despite poor GCSE results if they themselves have had a good education. Of course, greater prosperity makes it easier for parents to take active steps to rescue their offspring from academic failure, by supporting them financially while they stay on to re-sit examinations, by paying for extra tuition in certain subjects or even by sending them to specialist 'crammer' colleges. Another factor may be that parents who themselves work in manual

occupations may be more aware than parents in higher level occupations of the opportunities that exist for work-based vocational training, and they may place a higher value on craft occupations. The children of more prosperous parents tend to attend more successful schools than the children of poor parents, and this too is likely to influence decisions at age 16. Other things being equal, young people are more likely to stay on if in Year 11 they attended a school that had high staying on rates in previous years.[23]

Educational Maintenance Allowances

The pilots for the new mandatory Educational Maintenance Allowance (EMA) that were in progress at the time of writing are designed to establish whether financial help to full-time students aged 16 to 18 encourages educational participation. When members of YCS Cohort 9 were in Year 12, these pilots had not yet begun, but Local Education Authorities (LEAs) had discretionary powers to award EMAs to poorer students who wanted to stay on in full-time education after 16. In view of the differences in staying on rates between young people from different home backgrounds, it is worth taking a moment to look at EMA provision at this date.

There was considerable variation in policy between LEAs, with some offering a generous level of provision and others offering very little. In total, 9% of members of YCS Cohort 9 who were in full-time education at age 16/17 said that they were receiving a maintenance grant from their LEA. This proportion varied from a high of 14% of Year 12 students in the North West to a low of 3% of Year 12 students in the West Midlands.

The EMAs seemed to have been fairly well targeted on the poorer students. They were received by:

- 32% of students without a parent in employment compared to 5% of students who had a parent in employment;
- 20% of students living with only one parent compared to 6% of students living with both parents;
- 29% of students living in rented accommodation compared to 5% of students living in owner-occupied accommodation.

Of those who received an EMA, 87% gave information on the amount that they received. However some respondents appear to have been confused about the information that was requested, and the estimate of the average amount may include a

[23] See Cheng, 1995.

bigger than usual degree of reporting error.[24] This is suggested by the very wide range of values reported, from £3 to £1,350 per term, and an extremely large standard deviation (1333.9). Bearing this uncertainty mind, the mean size of EMA reported was £166 per term.[25]

In Chapter 5 we look at whether these discretionary EMAs encouraged young people who stayed in full-time education after 16 to continue into a second post-compulsory year.

[24] The questions on the size of the EMA were as follows:
'How much do you receive? Write in: £_____'
'Is this amount for a: term?/year?/other period? (write in)'.
The specific problem was that some respondents seemed to have interpreted the second part of the question as asking for how long a period the grant had been awarded for (for example, whether it was awarded for a one year or a two year course), rather than its intended meaning of the intervals at which payment was made (for example, monthly, termly or yearly).
[25] This estimate is based on a weighted base N of 766, unweighted base N = 700.

4 YEAR 12 COURSES AND PLACE OF STUDY

Trends in Year 12 courses

In this chapter we move on from young people's decisions about whether to stay on in full-time education after age 16 to look at the further choices they must make if they opt to stay. Important amongst these are which qualifications to aim for and where to study.

The decade covered by our data saw both a big expansion in full-time education after age 16 and the development of new qualifications designed to meet the needs of this wider intake. As a result the profile of courses followed by 16/17 year olds in full-time education changed, as Table 4.1 shows.[26]

TABLE 4.1
Courses followed by 16/17 year olds in full-time education, spring 1989-spring 2000

	Age 16-17 in spring:						
	1989 YCS 4 %	1991 YCS 5 %	1992 YCS 6 %	1994 YCS 7 %	1996 YCS 8 %	1998 YCS 9 %	2000 YCS 10 %
at least one A /AS level	61	59	56	54	56	57	59
of which:							
A /AS only	*37*	*37*	*35*	*36*	*40*	*44*	*44*
A /AS with GCSE or vocational courses	*23*	*23*	*21*	*18*	*16*	*13*	*15*
GCSE only	11	11	11	8	4	3	3
GCSE+vocational courses	7	9	10	11	11	7	7
vocational courses only	21	21	24	26	29	32	32
Total	100	100	100	100	100	100	100
Weighted N	*6,452*	*7,680*	*14,447*	*12,549*	*11,016*	*10,011*	*9,414*

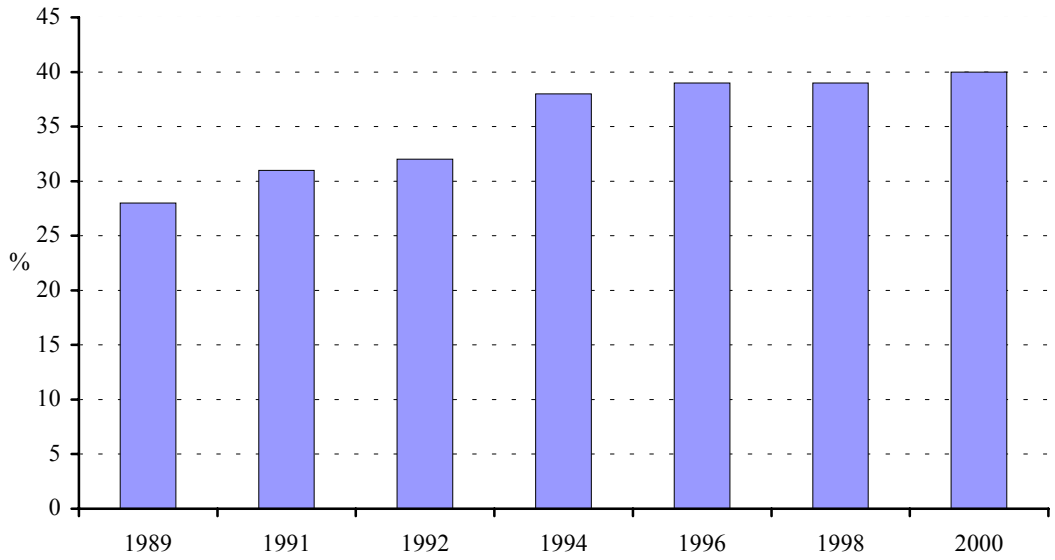
In spring 1989, 61% of 16/17 year old students were studying for at least one A or AS level.[27] During the first half of the 1990s when rates of participation in full-time education after 16 were rising very fast, the relative popularity of A and AS levels amongst full-time students declined, reaching a low point of 54% in 1994. Since then, a gradually increasing proportion of full-time students has opted for A or AS

[26] The analysis in this chapter relating to course type excludes young people in full-time education at age 16/17 who gave no information on the courses that they were following. In both YCS Cohort 9 and YCS Cohort 10 these formed 3% of those in full-time education at that age.

levels, and by spring 2000 the proportion was almost back to its 1989 level, with 59% of 16/17 year olds in full-time education studying for these qualifications.

Despite the 1990s dip in their relative popularity, there has been a steady rise in the number of young people following A or AS level courses when considered as a proportion of the full age group, including those not in full-time education. This is because of the overall growth in staying on rates at age 16. As Chart 4.1 shows, in spring 1989 28% of all 16/17 year olds were studying for A or AS levels, but by spring 2000 this had grown to 40%.

Chart 4.1
Proportion of all 16/17 year olds taking A or AS level courses, spring 1989 - spring 2000 (YCS 4-10)



Base Ns as for Chart 2.1.

Over the decade it has become less usual to take A or AS levels in combination with other courses. As Table 4.1 shows, in spring 1989, nearly two in five Year 12 A/AS level students (representing 23% of all full-time students at age 16/17) were also taking other courses. By 2000, this proportion had dropped to one in four (15% of all full-time students at age 16/17). Table 4.2 lists the courses that accompanied A/AS levels in Year 12. They were fairly evenly split between GCSEs and vocational courses, with 13% of Year 12 A/AS students also studying for GCSEs and 15% also taking vocational courses. These vocational courses were spread across Levels 1 to 3, though Level 3 was the most common.

[27] These were the 'old style' AS levels which were normally taken at the end of Year 13, not the new AS examinations normally taken at the end of Year 12, for which the first courses began in autumn 2000.

Returning to Table 4.1, we see that the proportion of full-time students studying only for GCSEs at age 16/17 (typically in order to re-sit Year 11 examinations) fell from 11% in spring 1989 to 3% in spring 2000. Nevertheless in the latter year a total of

Table 4.2
Additional courses followed by A/AS level students in full-time education at age 16/17, YCS 10 (spring 2000)

% also taking:	
No additional courses	74
GCSE	13
Any vocational course	15
Highest level of which:	
NVQ Level 1	2
NVQ Level 2	2
NVQ Level 3 or higher	7
no information on level	4
Weighted base N	*5,522*
Unweighted base N	*7,069*

Note: Percentages do not sum to 100 because some A/AS students were taking both GCSE and vocational courses.

Table 4.3
Additional courses followed by vocational students in full-time education at age 16/17 by highest level of vocational course, YCS 10 (spring 2000)

	Highest level of vocational course:				Total
	Level 1	Level 2	Level 3	no information	
% also taking:					
No additional courses	73	73	64	48	67
A or AS level	17	6	25	47	19
GCSE	12	23	16	11	18
Weighted base N	*652*	*1,785*	*1,532*	*509*	*4,478*
Unweighted base N	*487*	*1,348*	*1,712*	*517*	*4,064*

Note: Percentages do not sum to 100 because some students were taking both A/AS level and GCSE.

17% of full-time Year 12 students were studying for GCSEs, more than four in five of whom were also taking other courses. Also of note in Table 4.1 is the growth in the proportion of full-time students taking only vocational courses, which rose from 21% in spring 1989 to 32% in spring 2000. In contrast to GCSEs, the predominant pattern was for vocational courses to be taken on their own: as Table 4.3 shows, in spring 2000, two in three of all vocational students were not taking any other courses. Level 3 vocational courses were more likely than Level 1 or 2 courses to be accompanied by

study for other qualifications, with a quarter of full-time students on Level 3 courses also studying for A/AS levels and one in six also studying for GCSEs.

Year 12 courses and GCSE results

The courses that students took in Year 12 were strongly influenced by their Year 11 GCSE results. We might expect A/AS level students to have on average the best results, and Table 4.4 shows this to be the case. In YCS Cohort 10, the mean total GCSE points score of full-time A/AS students was 54, which is equivalent, for example, to six passes at grade A plus two passes at grade B.[28] Students who were studying only for A/AS levels had better GCSE results than those who were taking GCSEs or vocational courses alongside their A/AS studies, and some young people in the latter group were probably re-sitting GCSEs precisely in order to improve their grades. Year 12 students taking Level 3 vocational courses had much poorer GCSE results than A/AS level students: their mean GCSE points score was 41, equivalent, for example, to seven passes at grade C plus one pass at grade B. On average the students with the poorest GCSE results were vocational students on Level 2 or Level 1 courses and those who were taking only GCSEs. These groups had mean GCSE points scores of 28, 26 and 25.5 respectively, equivalent, for example, to seven D grades or less.[29]

TABLE 4.4
Mean points score in Year 11 GCSEs of young people in full-time education at age 16/17 by course type, YCS 10 (spring 2000)

	GCSE points score		*Base N*	
	mean	s.d.	*wtd*	*unwtd*
A/AS level	54.0	12.3	*5,522*	*7,069*
Of which:				
A/AS level only	56.1	11.1	*4,105*	*5,355*
A/AS level with GCSE or vocational courses	47.8	13.6	*1,416*	*1,714*
Any vocational course (with or without other courses)	33.5	14.8	*4,478*	*4,064*
Highest level of which:				
NVQ Level 1	26.1	16.6	*651*	*487*
NVQ Level 2	28.4	11.1	*1,785*	*1,348*
NVQ Level 3 or higher	41.3	11.1	*1,533*	*1,712*
no information on level	37.8	20.4	*509*	*517*
GCSE only	25.5	14.8	*257*	*192*

[28] See the note to Table 2.2 for how total GCSE points score is calculated.
[29] Sample numbers for students taking only GCSEs are small, but the estimate of their mean points score is similar to the estimate of 26.7 points derived from YCS Cohort 9.

Table 4.5 divides 16/17 year olds in full-time education into three groups according to their position in the national distribution of Year 11 GCSE results. It brings the relationship between GCSE results and Year 12 courses into very sharp focus. Amongst those in the top third, 93% were taking A/AS level courses, including

TABLE 4.5
Courses followed by 16/17 year olds in full-time education by GCSE results band, YCS 10 (spring 2000)

	GCSE results band		
	Top 3rd %	Middle 3rd %	Bottom 3rd %
A/AS level only	76	24	3
A/AS level with GCSE or vocational courses	17	18	6
GCSE only	+	3	7
Level 3 vocational (with or without GCSE)	6	24	7
Other vocational (with or without GCSE)	1	30	77
Total	100	100	100
Weighted base N	*4,303*	*3,239*	*1,873*
Unweighted base N	*5,720*	*3,395*	*1,197*

+ 0.5% or less, but not zero.

76% who were taking them without any accompanying courses. In contrast, 84% of the bottom third were taking vocational courses of Level 1 or Level 2 or GCSEs. Only 9% of the bottom third were taking any A/AS levels, with a further 7% taking Level 3 vocational courses. Those in the middle third of GCSE results were much more evenly spread across courses. The corresponding table derived from YCS Cohort 9 produced very similar results.

Other factors affecting course choice

Although GCSE results are the most important factor affecting the choice of Year 12 courses, other factors are also involved. In YCS Cohort 10, female full-time students aged 16/17 were overall more likely than male students to be taking A/AS level courses, with 58% on A/AS level courses compared to 55% of males. However this was because young women had on average better GCSE results than young men - if we compare young people with similar GCSE results, we find that male students were a little more likely than female students to take A/AS levels and female students were a little more likely than male students to opt for vocational qualifications. As Table 4.6 shows, this pattern held throughout the range of GCSE attainment in YCS 10. Similar results were found in YCS 9 (table not shown).

It will be recalled from Chapter 3 that average GCSE performance varied a lot between ethnic groups, and courses followed in Year 12 reflected this variation. Table 4.7 aggregates data from YCS Cohorts 9 and 10 in order to increase sample

TABLE 4.6
Courses followed by 16/17 year olds in full-time education by sex and GCSE results band, YCS 10 (spring 2000)

	Top 3rd results		*Middle 3rd results*		*Bottom 3rd results*	
	Male	Female	Male	Female	Male	Female
2000 (YCS 10)						
% taking:						
A /AS level	93	92	45	39	9	7
GCSE	7	10	25	25	27	21
any vocational qualification	14	18	61	70	88	89
Level 3 vocational	8	10	27	34	9	8
Weighted base N	*1,872*	*2,430*	*1,606*	*1,633*	*993*	*881*
Unweighted base N	*2,276*	*3,444*	*1,580*	*1,815*	*603*	*815*

Note: Percentages do not sum to 100 because some students were taking more than one type of course.

TABLE 4.7
Courses followed by 16/17 year olds in full-time education by ethnic group, YCS 9 and 10 combined (spring 1998 and 2000)

	White	Black	Indian	Pakistani/ Bangladeshi	Other
% taking:					
A/AS level	57	37	62	34	60
any vocational qualification	44	57	39	59	39
Weighted base N	*17,060*	*524*	*731*	*737*	*692*
Unweighted base N	*18,759*	*456*	*764*	*665*	*713*

numbers. It shows that students of Indian or 'other' origins (which included Chinese as an important subgroup) were more likely than white students to be taking A/AS level courses, while black students and those of Pakistani or Bangladeshi origin were much less likely than white students to be studying for A/AS levels. With vocational courses, the opposite pattern was found. If, however, we compare young people with similar GCSE results, as in Table 4.8, we find that ethnic minority students, taken as a group, were more likely than white students to opt for A/AS level courses, and less likely than white students to choose vocational courses. Though sample numbers are small in some subgroups, similar patterns are found both in YCS Cohort 9 and in YCS Cohort 10. Unfortunately sample numbers do not allow us to distinguish different ethnic groups in this analysis, even aggregating the two cohorts.

A third factor that appears to influence course choice is home background. Chapter 3 reported big differences in Year 11 GCSE results between young people from more and less advantaged home backgrounds, and course choices reflected these. In YCS Cohort 10, 72% of Year 12 students with parents in higher level occupations (SOC 1-3: managers and administrators; professional; associate professional and technical) were taking A/AS levels. Amongst students with parents in middle level occupations

TABLE 4.8
Courses followed by 16/17 year olds in full-time education by ethnic group and GCSE results band, YCS 9 and 10 (1998 and 2000)

	Top 3rd results		*Middle 3rd results*		*Bottom 3rd results*	
	White	Minority	White	Minority	White	Minority
2000 (YCS 10)						
% taking:						
A/AS level	93	96	42	44	8	11
GCSE	9	7	24	29	23	31
any vocational qualification	17	14	66	61	90	85
Level 3 vocational	9	6	32	23	9	6
Weighted base N	*3,792*	*459*	*2,717*	*452*	*1,446*	*362*
Unweighted base N	*5,066*	*588*	*2,890*	*435*	*940*	*217*
1998 (YCS 9)						
% taking:						
A/AS level	93	95	38	42	4	4
GCSE	10	11	29	37	22	23
any vocational qualification	14	13	64	55	89	86
Level 3 vocational	8	7	29	21	10	6
Weighted base N	*4,179*	*446*	*2,843*	*462*	*1,579*	*390*
Unweighted base N	*5,230*	*531*	*3,054*	*476*	*1,121*	*265*

Note: Percentages do not sum to 100 because some students were taking more than one type of course.

(SOC 4-7: clerical and secretarial; craft and related; personal and protective service; sales), 51% were taking A/AS levels, and amongst those with parents in lower level occupations (SOC 8-9: plant and machine operatives; unskilled occupations) the figure was 41%. Vocational courses showed the converse pattern: 32% of students with parents in higher level occupations were taking vocational courses compared to 51% of students with parents in middle level occupations and 62% of students with parents in lower level occupations.

However these differences were not wholly accounted for by differences in GCSE results: comparing students with similar GCSE results, quite big differences by parental occupation remained, as Table 4.9 shows. For example in YCS Cohort 10, if they had parents in higher level occupations, 95% of full-time students in the top third of GCSE results were taking A/AS levels, but if they had parents in lower level occupations, 86% were taking A/AS levels. In this top third of GCSE results, students with parents in lower level occupations were twice as likely as students with parents in higher level occupations to opt for Level 3 vocational qualifications. Turning to the bottom third of GCSE results, we see that students with parents in higher level occupations were still more likely to be taking A/AS levels than students with parents in lower level occupations (13% compared to 8%). Because of small sample numbers in some subgroups, Table 4.9 also reports figures from YCS Cohort 9, which show a similar pattern.

TABLE 4.9
Courses followed by 16/17 year olds in full-time education by parental occupation and GCSE results band, YCS 9 and 10 (1998 and 2000)

	higher occupations (SOC 1,2 & 3)	middle occupations (SOC 4,5,6,7)	lower occupations (SOC 8,9)
2000 (YCS 10)			
Top 3rd results - % taking:			
A/AS level	95	90	86
GCSE	8	8	11
any vocational qualification	13	20	25
Level 3 vocational	6	11	17
Weighted base N	*2,390*	*1,341*	*531*
Unweighted base N	*3,205*	*1,770*	*406*
Middle 3rd results - % taking:			
A/AS level	49	40	38
GCSE	24	25	25
any vocational qualification	60	66	70
Level 3 vocational	31	31	30
Weighted base N	*1,147*	*1,218*	*622*
Unweighted base N	*1,233*	*1,267*	*643*
Bottom 3rd results - % taking:			
A/AS level	13	7	8
GCSE	35	23	20
any vocational qualification	80	90	91
Level 3 vocational	8	8	11
Weighted base N	*372*	*747*	*435*
Unweighted base N	*240*	*475*	*278*
1998 (YCS 9)			
Top 3rd results - % taking:			
A/AS level	96	90	89
GCSE	10	10	14
any vocational qualification	11	18	20
Level 3 vocational	5	11	13
Weighted base N	*2,539*	*1,452*	*443*
Unweighted base N	*3,139*	*1,825*	*564*
Middle 3rd results - % taking:			
A/AS level	46	36	34
GCSE	30	30	33
any vocational qualification	56	66	65
Level 3 vocational	27	29	28
Weighted base N	*1,057*	*1,383*	*549*
Unweighted base N	*1,144*	*1,479*	*580*
Bottom 3rd results - % taking:			
A/AS level	9	3	1
GCSE	24	21	25
any vocational qualification	84	89	90
Level 3 vocational	10	10	8
Weighted base N	*368*	*756*	*439*
Unweighted base N	*258*	*538*	*307*

Note: Percentages do not sum to 100 because some students were taking more than one type of course.

Year 11 school and place of study in Year 12

Though many young people who choose to continue in full-time education after age 16 stay on in the sixth form of the school that they attended in Year 11, in many parts of the country they also have the option of transferring to a Further Education (FE) college or to a sixth form college. If their Year 11 school has no sixth form, then a move is of course forced upon them, a factor which discourages some from further full-time study.[30] In this section we look at the relationship between Year 11 school and place of study in Year 12.

The format of the YCS question on which type of institution students were attending at age 16/17 was changed between Cohort 9 and Cohort 10 in a way which led to the proportion of students in state sector colleges being underestimated and the proportion in other types of college being over-estimated in Cohort 10. This can be seen in Table 4.10, which uses the wording of the two questionnaires. Hence the analysis in this section is based on data from YCS Cohort 9, relating to spring 1998. At that time, around half of full-time students aged 16/17 were in school sixth forms and around a third were in FE colleges, while sixth form colleges accounted for about one in seven.

TABLE 4.10
Institution attended by 16/17 year olds in full-time education, 1998 and 2000 (YCS 9 and 10)

	1998 YCS 9 %	2000 YCS 10 %
School sixth form	49	47
Sixth form college	14	17
College of further education (state system) *[YCS 9]*	32	-
Independent/private college *[YCS 9]*; more than one institution[1]	2	-
Further Education/tertiary college *[YCS 10]*		25
Independent/other college*[YCS 10]*; more than one institution[1]	-	8
No information	4	3
Total	100	100
Weighted base N	*10,359*	*9,753*
Unweighted base N	*11,086*	*10,608*

[1]Category derived in analysis.

The type of school that young people attended in Year 11 was a very strong determinant of their place of study in Year 12. As Table 4.11 shows, the large majority of pupils in selective and independent schools who continued their full-time education after age 16 attended a school sixth form - usually in the same school where they had spent Year 11. In comprehensive schools with sixth forms, just under two-thirds of continuing students stayed in a school sixth form while a quarter moved to

[30] This was demonstrated by the statistical model of the decision to stay in full-time education after 16 reported in Payne 1998, Table 5.1.

TABLE 4.11
Full-time educational institution attended in Year 12 by type of school attended in Year 11, 1998 (YCS 9)

	Year 11 school:				
	Compre-hensive to 16 %	Compre-hensive to 18 %	Selective %	Secondary Modern %	Indepen-dent %
Year 12 institution:					
School sixth form	6	63	87	43	83
Sixth form college	33	5	3	3	8
FE college (state system)	52	26	8	48	6
Other/no information	8	5	2	5	3
Total	100	100	100	100	100
Weighted base N	*3,077*	*5,503*	*466*	*316*	*998*
Unweighted base N	*3,197*	*5,983*	*586*	*301*	*1,017*

TABLE 4.12
Type of school attended in Year 11 by full-time educational institution attended in Year 12, 1998 (YCS 9)

	Year 12 institution:		
	School sixth form %	Sixth form college %	FE college %
Year 11 school:			
Comprehensive to 16	4	72	49
Comprehensive to 18	69	21	44
Selective	8	1	1
Secondary Modern	3	1	5
Independent	16	6	2
Other/no information	-	-	-
Total	100	100	100
Weighted base N	*5,061*	*1,417*	*3,290*
Unweighted base N	*5,730*	*1,615*	*3,186*

FE college; relatively few moved to sixth form colleges. A third of continuing students from comprehensive schools without sixth forms moved to sixth form colleges and around half went to FE college. Obviously, the high use of sixth form colleges by students from comprehensive schools without sixth forms was due to the structure of post-16 educational provision in their locality. Variations in the local structure of provision also explain why very few continuing students from secondary modern schools went on to sixth form colleges.

Table 4.12 turns the relationship between Year 11 school and place of study in Year 12 the other way around. It shows that sixth form colleges drew nearly three quarters of their Year 12 full-time students from comprehensive schools without sixth forms, and drew only a fifth from comprehensive schools with sixth forms. FE colleges, in contrast, drew much more equally from these two sources, with 49% of Year 12 students in FE colleges coming from comprehensive schools without sixth forms and 44% coming from comprehensive schools with sixth forms.

Course mix in Year 12 institutions

There was a degree of specialisation between school sixth forms, sixth form colleges and FE colleges in the courses followed by Year 12 students. Table 4.13 shows that while school sixth forms and sixth form colleges had otherwise similar course profiles, sixth form colleges had rather more GCSE students. In fact statistical modelling using data from YCS Cohort 8 shows that, after controlling for GCSE points score, course mix and the number of subjects studied in addition to home background and other factors, sixth form colleges have a significantly higher success rate in GCSE re-sits than school sixth forms.[31] This could be because the GCSE student in a sixth form college has a new teacher who has no prior expectations of the student, and there are no memories on either side of possibly unhappy experiences in Year 11. This could set up a virtuous circle, with students being more likely to want to try again at GCSE and the college, knowing that they have a good success rate, more likely to encourage the student to do so.

TABLE 4.13
Courses followed by 16/17 year olds in full-time education by institution attended, 1998 (YCS 9)

	School sixth form	Sixth form college	FE college
% taking:			
A/AS level	75	74	21
GCSE	17	26	19
any vocational qualification	27	27	73
Level 3 vocational	8	7	28
Weighted base N	*5,061*	*1,417*	*3,289*
Unweighted base N	*5,730*	*1,615*	*3,186*

Note: Percentages do not sum to 100 because some students were taking more than one type of course.

Table 4.13 also shows that both school sixth forms and sixth form colleges had many more A/AS students than FE colleges, with around three quarters of their full-time

[31] Payne 2001, Table 2.12.

Year 12 students taking at least one A or AS level, compared to about a fifth in FE colleges. In contrast, nearly three quarters of FE college students were taking a vocational qualification of some kind, with 28% aiming for Level 3. This compared to just over a quarter of Year 12 students taking vocational courses of any level in school sixth forms and sixth form colleges, and less than one in ten taking Level 3 courses. This specialisation accords with the relative strengths of the three types of institution as revealed by student success rates. Statistical modelling has shown that, other things being equal, students on A level courses in school sixth forms and sixth form colleges were more likely to obtain their qualification than students on A level courses in FE colleges.[32] A similar model has shown that GNVQ students were more likely to be successful in FE college than in a school sixth form.[33]

Year 11 GCSE results and place of study in Year 12

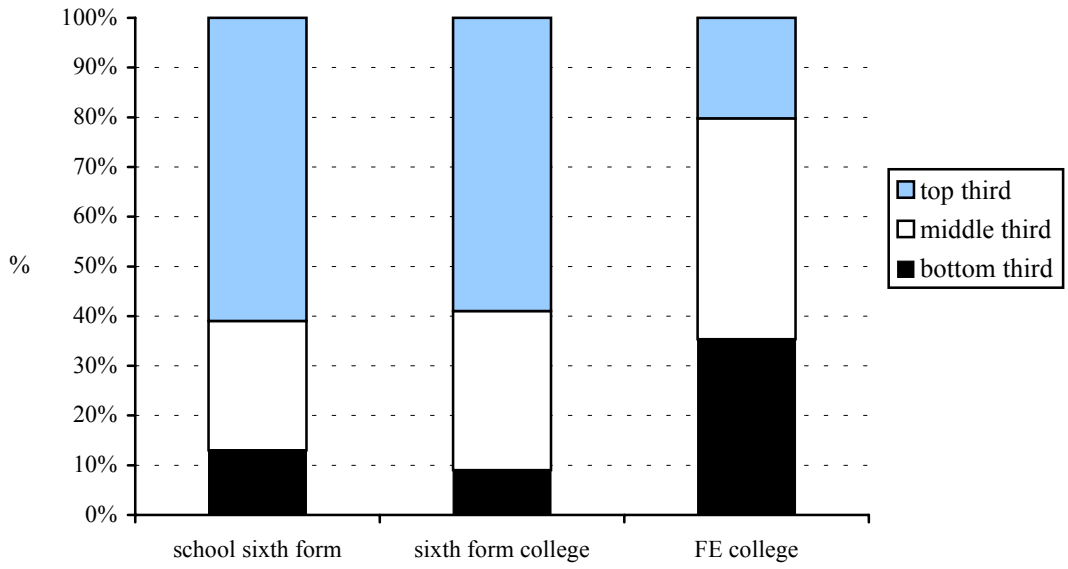
Given the fact that A level students were much more likely to opt for school sixth forms or sixth form colleges than for FE college, it is not surprising that Year 12 students in sixth forms and sixth form colleges had on average much better Year 11 GCSE results than Year 12 students in FE colleges. Table 4.14 shows that while full-time Year 12 students both in school sixth forms and in sixth form colleges had mean total GCSE points scores of 48, the mean score of FE college students was 33.[34] Similarly, Chart 4.2 shows that around three fifths of school sixth form and sixth form college students were in the top third of the national distribution of Year 11 GCSE results, compared to one fifth of FE college students. It is also interesting to note that although the mean GCSE points scores of students in school sixth forms and sixth form colleges were not significantly different from each other, a smaller proportion of sixth form college students than of school sixth form students were in the bottom third of results. This is perhaps connected with the fact that sixth form colleges draw their intake largely from comprehensive schools without sixth forms (see Table 4.12), and, as mentioned earlier, other things being equal, pupils in comprehensive schools without sixth forms are less likely to stay in full-time education after 16 than pupils in comprehensive schools with sixth forms.[35] It is possible than the deterrent effect of being forced to transfer to a new institution after 16 is particularly likely to discourage low achievers from staying in full-time education.

[32] Payne 2001, Table 3.12.
[33] Payne 2001, Table 5.13.
[34] See the note to Table 2.2 for how total GCSE points score was calculated.
[35] See Payne 1998, Table 5.1.

TABLE 4.14
Mean total points score in Year 11 GCSEs of full-time students aged 16/17 by place of study, 1998 (YCS 9)

	School sixth form %	Sixth form college %	FE college %
mean total points score	47.9	47.6	33.4
s.d.	16.3	14.5	15.7
Weighted base N	*5,061*	*1,417*	*3,289*
Unweighted base N	*5,730*	*1,615*	*3,186*

Chart 4.2
Proportion of full-time students aged 16/17 in the top, middle and bottom thirds of the national distribution of Year 11GCSE results by place of study, 1998 (YCS 9)



Base Ns as for Table 4.14.

Table 4.15 compares the Year 11 GCSE results of students who were studying for the same qualifications in different post-16 institutions. It shows that A/AS level students in school sixth forms had on average slightly better results than A/AS students in sixth form colleges - though quite small, the difference between the mean total points score of these two groups was statistically significant at the .001 level of probability. Both groups had significantly better results than A/AS students in FE colleges. For GCSE students, there was no statistically significant difference in the mean total points score of students in school sixth forms and in sixth form colleges, though rather fewer sixth

TABLE 4.15
Year 11 GCSE results of full-time students aged 16/17 by place of study and qualifications sought, 1998 (YCS 9)

	School sixth form %	Sixth form college %	FE college %
A/AS level:			
mean total points score	54.6	53.1	49.4
s.d.	10.7	11.0	11.0
% in top third of national distribution	79%	77%	63%
Weighted base N	*5,061*	*1,417*	*3,289*
Unweighted base N	*5,730*	*1,615*	*3,186*
GCSE:			
mean total points score	40.5	40.0	32.8
s.d.	15.5	12.2	13.6
% in top third of national distribution	35%	28%	12%
Weighted base N	*857*	*367*	*623*
Unweighted base N	*900*	*386*	*590*
Any vocational qualification:			
mean total points score	33.0	37.7	30.7
s.d.	14.9	14.3	14.1
% in top third of national distribution	18%	26%	12%
Weighted base N	*1,387*	*379*	*2,404*
Unweighted base N	*1,286*	*381*	*2,236*
Level 3 vocational qualifications:			
mean total points score	41.0	43.0	39.5
s.d.	10.2	10.4	11.1
% in top third of national distribution	29%	39%	24%
Weighted base N	*380*	*(98)*	*909*
Unweighted base N	*429*	*(112)*	*1,003*

form college students were in the top third of the national distribution. However GCSE students in both school sixth forms and sixth form colleges had markedly higher mean points scores than GCSE students in FE colleges. Turning next to vocational qualifications taken as a group, we see that vocational students in sixth form colleges had better Year 11 results than vocational students in school sixth forms, who in turn had better results than vocational students in FE colleges (all these differences in mean points score were statistically significant at the .001 level of probability). However if we focus just on Level 3 vocational qualifications, the statistically significant difference between school sixth forms and FE colleges disappears, though the difference between sixth form colleges and FE colleges remains significant at the .01 level of probability.

5 RETENTION AND RETURNS

Introduction

The last two chapters have focussed on young people's decisions about whether to continue in full-time education after the age of 16, and on the courses they choose to take and the institutions they choose to attend if they do stay on. However these decisions are not the end of the story. For many young people the late teens are a period of trial and experiment in terms of career paths, and it is also important to understand what factors put young people who stay in full-time education after 16 at risk of dropping out at a later date. Conversely, young people who leave full-time education at 16 may later find that they have made the wrong choice. We need to know how many return to full-time education at a later date, and what are the factors that encourage them to do so. Thus this chapter is concerned with the twin issues of retention and returns.

The analysis in this chapter is based on YCS Cohort 9, because this is the most recent cohort with information from second and third sweep surveys. In considering retention, it draws on data from Sweep 2, which took place in spring 1999 when cohort members were aged 17/18. Sweep 3 data relating to age 18/19 are not used to study retention because many young people take the third post-compulsory year as a 'gap' year between secondary and higher education, and it could be misleading to treat young people who were not in full-time education in that year as having left full-time education permanently. However in looking at returns to full-time education we use data from all three sweeps. Note that sample numbers are smaller than in earlier chapters because of sample attrition between sweeps.

There is a particular complication in using the Sweep 2 data from Cohort 9 to examine retention, which arises from the fact that the initial mailing of questionnaires to cohort members took place on April 28, somewhat later than for earlier cohorts, and returned questionnaires were accepted up until July 23rd. It follows that a number of respondents could have already sat their examinations and left school or college by the time they filled in their questionnaire. Thus even if they had completed two years of post-compulsory full-time education, their main activity at the time of the survey could have been something quite different. For this reason, the analysis of retention is based on the main activity that respondents reported in their retrospective

'diaries' of activities for March and April 1999.[36] In the rest of the chapter, young people who were in full-time education in both spring of Year 12 (1998) and spring of Year 13 (1999) are referred to as 'stayers', while those who were in full-time education in spring of Year 12 but not in spring of Year 13 are referred to as 'leavers'.

Rates of retention

Rates of retention in full-time education need to be interpreted with care. Young people who left before the spring of Year 13 were not necessarily drop outs: if they stayed on at 16 just to re-sit GCSEs or to take one-year Level 1 or Level 2 vocational courses, they may have successfully completed their studies and left full-time education in order to take the next step on their planned career path. In our data, just over half of full-time Year 12 students who had left full-time education by the spring of Year 13 said then that they had obtained a qualification since the end of Year 12. On the other hand, students who successfully completed one year courses in Year 12 could if they wished move on to take higher level courses in Year 13. Vocational courses are planned to permit such progression, and GCSE resits may enable students to satisfy the entry requirements that many schools or colleges have for A/AS courses. Thus although students on one year courses who left at the end of Year 12 could not be described as drop-outs, neither were they taking up the opportunities that were available to them to continue their full-time education. Note also that small minority of students take their A level examinations a year early, at the end of Year 12, and the inclusion of these amongst the leavers means that we slightly under-estimate the retention rate. [37]

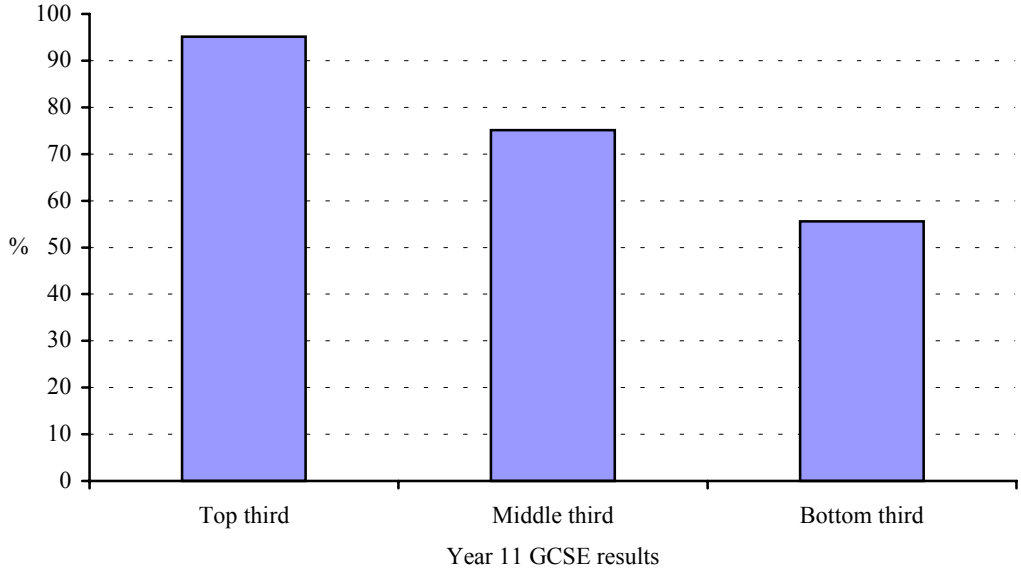
In total, 80% of young people who were in full-time education in the spring of Year 12 were still in full-time education in the spring of Year 13. As Chart 5.1 shows, Year 11 GCSE results had a strong relationship with retention rates. More than nine out of ten students in the top third of the national distribution of results were stayers, compared to three in four students in the middle third of results and just over half of students in the bottom third of results.

Table 5.1 gives the retention rates for a range of different subgroups amongst Year 12 students. Clearly the relationship between retention and GCSE results was an

[36] There is a further complication, namely that in the retrospective record of the 'main activity' in each month since the previous survey, respondents may have reported that they were 'on holiday' if the month spanned a holiday period. In 1999, Easter Sunday fell on April 4th, so that full-time students could have been on holiday in either March or April. Thus in this analysis, young people are classified as being in full-time education in spring 1999 if they said that their main activity in either March or April was full-time education, and if their main activity in the other month was either full-time education or being on holiday.

[37] The new style AS levels introduced for the academic year 2000/01, which mean that A level students do one-year courses in Year 12, were not in operation at the date to which the present study refers.

Chart 5.1
Proportion of young people in full-time education at age 16/17 who were still in full-time education at age 17/18 by Year 11 GCSE results: YCS 9.



Base Ns: *Top third: 3,193 weighted, 4,759 unweighted*
Middle third: 2,250 weighted 2,473 unweighted
Bottom third: 1,474 weighted 898 unweighted

Table 5.1
Retention rates for selected groups (percentage of students in full-time education at age 16/17 who were still in full-time education at age 17/18): 1999 (YCS 9)

		Base N	
	%	*weighted*	*unweighted*
All students in full-time education at age 16/17	80	*6,916*	*8,130*
Males	78	*3,329*	*3,465*
Females	82	*3,587*	*4,665*
White students	79	*5,956*	*7,146*
Members of ethnic minorities	87	*879*	*906*
Parents in higher level occupations	87	*2,749*	*3,595*
Parents in middle level occupations	77	*2,507*	*2,869*
Parents in lower level occupations	74	*1,017*	*1,072*
Taking A or AS level	94	*3,800*	*5,511*
Taking Level 3 vocational qualifications	79	*1,007*	*1,158*
Taking Level 1 or 2 vocational qualifications (highest level)	59	*1,833*	*1,446*
Taking only GCSEs	67	*232*	*180*
School sixth form	86	*3,388*	*4,398*
Sixth form college	86	*950*	*1,237*
FE college	71	*2,209*	*2,156*

important factor behind the variation between subgroups, but the crude retention rates (before adjusting for other factors) are nevertheless of interest. Young women were more likely to be stayers than young men (82% compared to 78%), and students from ethnic minorities were more likely to be stayers than white students (87% compared to 79%). In addition, young people were more likely to be stayers if they had parents in higher level occupations (87%) than if they had parents in middle level occupations (77%) or in lower level occupations (74%).[38] In these respects, the factors associated with retention were the same as those associated with the initial decision to stay in full-time education after 16.

As we would expect, retention rates also varied with type of course and place of study in Year 12. As Table 5.1 also shows, 94% of A/AS students were stayers, compared to 79% of students taking Level 3 vocational courses, which also last two years (these two groups overlapped as some students took both A/AS level and Level 3 vocational courses). Amongst students who were seeking only Level 1 or Level 2 vocational qualifications the retention rate was 59%. This was lower than the estimate of 67% for students taking only GCSEs, though the latter was based on small sample numbers.

Given that FE college students were much less likely than students in school sixth forms or sixth form colleges to be taking A/AS levels, it is not surprising to find that the retention rate in FE colleges was lower than elsewhere. As we see in the table, 71% of full-time Year 12 students in FE colleges were still in full-time education one year later, compared to 86% of students both in school sixth forms and in sixth form colleges.

Modelling retention

Obviously many of the factors that affect retention rates are correlated with each other, and in order to get a proper picture we need to make allowance for this by statistical modelling. Thus Table 5.2 presents a model based on students in full-time education in the spring of Year 12, in which the dependent variable was whether or not the student was still in full-time education in the spring of Year 13. The type of model fitted was a logistic regression model; the box on page 57 gives more technical details and explains how the results are interpreted. Note that in developing the model a wide range of potential predictor variables were tested for statistical significance, and only those that were significantly associated with the probability of

[38] Higher level occupations are defined as SOC 1-3: managers and administrators; professional; associate professional and technical; middle level occupations are defined as SOC 4-7: clerical and secretarial; craft and related; personal and protective service; sales; and lower level occupations are defined as SOC 8-9: plant and machine operatives; unskilled occupations.

TABLE 5.2
Logistic regression model for being in full-time education in March/April of Year 13, conditional on being in full-time education 12 months previously: YCS 9

		coefficient (exponentiated)
	Constant	4.41
Year 11 GCSE points score deciles[+]		
	Bottom	1.00
	Second	1.44****
	Third	1.86****
	Fourth	1.98****
	Fifth	2.72****
	Sixth	3.37****
	Seventh	4.45****
	Eighth	5.97****
	Ninth	6.19****
	Top	6.31****
Sex		
	Male	1.00
	Female	1.21***
Ethnicity		
	White	1.00
	Black	3.59****
	Indian	2.86****
	Pakistani/Bangladeshi	2.67****
	Other	2.28****
	No information	1.31
Parent's qualifications		
	One or both has a degree	1.00
	One or both has A levels	0.77*
	Neither has degree or A levels	0.59****
	No information	0.62****
Household tenure (Year 12)		
	Owner-occupied	1.00
	Rented	0.81**
	Other/no information	0.76
Government Office Region (Year 12)		
	South East	1.00
	North East	0.98
	North West	1.02
	Yorkshire & Humberside	1.09
	East Midlands	1.50***
	West Midlands	1.15
	Eastern	0.93
	London	0.82
	South West	0.81
	Wales	1.19
Truancy in Year 11		
	None	1.00
	Odd days or lessons	0.78****
	Particular days or lessons	0.74*
	Days or weeks at a time	0.34****
	No information	1.52
Exclusion from school		
	Never excluded/no answer	1.00
	Excluded (permanently or temporarily)	0.58****

Table continued on following page....

Table 5.2 continued...

	coefficient (exponentiated)
Year 12 course	
A level/AS only	1.00
A level/AS with other courses	1.10
GCSEs only	0.37****
Level 3 vocational (inc. with GCSEs)	0.44****
Other vocational (inc. with GCSEs)	0.25****
None/no information	0.37****
LEA maintenance grant in Year 12	
No grant	1.00
Receives grant	1.36***
No information	0.74
Whether had part-time/temporary job in Year 12	
Had job in Spring of Year 12	1.00
Had job earlier, but not in Spring of Year 12	1.02
No job at all in Year 12	1.41****
No information	1.86*
Whether got a place in education, work or training that they wanted (answered in Year 12)	
Yes	1.00
To some extent	0.72****
No	0.82
No answer	1.47
Views on schooling in Years 10 & 11 (reported in Year 12)	
0/4 favourable	1.00
1/4 favourable	1.43*
2/4 favourable	1.20
3/4 favourable	1.14
4/4 favourable	1.46**
No information	1.18
Weighted Sweep 1 N	6,916 8,130 5,276
Unweighted Sweep 1 N	8,077
Scaled deviance	
residual df	

[+]Deciles are calculated on the basis on the unweighted frequencies within the sample on which the model is based.

Significance levels: * 10% ** 5% *** 1% **** 0.1% (2-tail test)

continuing or leaving full-time education were included in the final version. Thus for example, parental occupation was included in preliminary versions but proved not to be significantly associated with retention once other factors were taken into account - though other variables related to parental occupation, notably parental qualifications and household tenure retained an independent effect.

Note that for all the predictor variables included in the model, information was collected at the Sweep 1 survey, which took place in the spring of Year 12 when all members of the sample were still in full-time education. This means that information on all the predictor variables pre-dates the decision about whether to stay on in Year

13 or to leave. Nevertheless it is important to stress that a significant predictor variable in the model should not be interpreted as necessarily demonstrating a causal

INTERPRETING THE COEFFICIENTS OF A LOGISTIC REGRESSION MODEL

The coefficients of a logistic regression model, when exponentiated, represent the multiplicative effect of each predictor variable on the odds of the outcome being modelled - in this case, staying in post-compulsory full-time education for a second year. The 'base' or 'reference' category of each categorical predictor variable is set to 1.00, and the effects of the other categories are assessed relative to this. Estimates less than 1.00 indicate a reduction in the odds of staying relative to the base category, and estimates greater than 1.00 indicate an increase in the odds, after taking into account the effects of all the other variables included in the model. Thus for example, other things being equal, female students' odds of staying are estimated to be a fifth as great again as the odds for male students. Similarly, the odds of staying for young people living in rented accommodation are estimated to be four-fifths as great as the odds for young people living in owner-occupied accommodation.

The constant in the model represents the estimated odds of staying for someone in the base category of each predictor variable. In this case, this means a white male in the bottom decile of GCSE points score with parents educated to degree level, and so on.

Note that we have talked about the *odds* of staying on, not the probability. Odds are an alternative way of expressing probabilities; thus

odds = probability/(1-probability)

and probability = odds/(1+odds).

For example, if 75 out of 100 young people stayed on for a second year, their probability of staying would be 0.75 or 75%, but their odds of staying would be three to one on (3/1, or 3.00). If only 25 stayed, then their probability of staying would be 0.25 or 25%, while their odds of staying would be three to one against (1/3, or 0.33).

It follows that the multiplicative effect of a predictor variable on the *odds* of staying is not the same as its multiplicative effect on the *percentage probability* of staying. Consider, for example, a hypothetical case where 75 out of 100 males and 50 out of 100 females stay on for a second year. For males the odds of staying are 75/25 = 3.00, while for females the odds of staying are 50/50 = 1.00 (evens). In this imaginary case, being male increases the *percentage probability* of staying by a factor of 1.50 (75/50), but increases the *odds* of staying by a factor of 3.00 (3.00/1.00).

Significance testing in the logistic model is carried out by adding new predictor variables one at a time and testing whether the term as a whole, with all its categories, produces a significant improvement in the fit of the model, given the predictor variables already included. The model presented above is parsimonious, in that predictor variables are retained only if they improve model fit. Significance levels for individual categories of the predictor variable (such as specific ethnic groups) are based on the t-test, which approximates to the above. The t-test is useful for exploring which specific categories of the predictor variable are responsible for the variable's overall impact on model fit.

impact on the decision about whether to stay or to leave. Although in some cases the causal impact of the predictor variable is the most plausible explanation for the significant association, in other cases the causal relationship may run in the reverse direction - for example, someone may choose to do only GCSE re-sits in Year 12 because they have already decided to leave at the end of the year. In other cases, the significant association between the predictor variable and the dependent variable may occur because they are both determined by a third factor about which we have no information in our data.

Model results

Our model of retention reported in Table 5.2 showed that good GCSE results strongly increased the probability that a full-time Year 12 student would stay in full-time education until the end of Year 13. Students in the top decile of the national distribution of Year 11 GCSE results had odds of staying that were more than six times as great as the odds for a student in the bottom decile. The marginal effect of better GCSE results was especially big in the middle of the distribution of GCSE results.

Even after controlling for GCSE results and all the other variables included in the model, female Year 12 students were still significantly more likely to stay until the end of Year 13 than male students. Ethnicity also kept a highly significant effect, with all four minority groups distinguished in the model having odds of staying that were between two and three times as great as the odds for white students.

As already mentioned, parental occupation did not have an independent association with staying once other factors were taken into account. However, parental qualifications were significant, with the children of parents who had A levels being less likely to stay than the children of parents with degrees, and the children of parents who had neither of these qualifications less likely to stay than either. Household tenure was also significant, students living in rented housing being less likely to stay until the end of Year 13 than students living in owner-occupied accommodation.

Region significantly improved the fit of the model when added to the predictor variables, but only one region, the East Midlands, was significant individually. In that region Year 12 students were more likely to stay until the end of Year 13 than students in the reference category, the South East. The impact of the regional variable is thus difficult to interpret, and the finding for the East Midlands may be just a chance result.[39]

[39] The result was significant at the 1% level of probability, which means it would occur by chance once in a hundred times. As 53 parameters are estimated in the model, a chance result is not implausible.

Two indicators were available of behaviour in school before Year 12, and both showed the expected results. Young people who had stayed on in full-time education after age 16 despite having played truant in Year 11 were more likely to leave before the end of Year 13 than those who had never played truant, and the greater the extent of the truancy, the greater the impact. Similarly, young people who had stayed on after 16 despite having been excluded from school at an earlier date were less likely than those who had not been excluded to stay until the end of Year 13.

Not surprisingly, students on Year 12 courses that typically last just one year - in this case, GCSEs and vocational courses of Level 1 or Level 2 - were less likely to stay to the end of Year 13 than students studying for A or AS levels. However students on Level 3 vocational courses, which take two years to complete, were also significantly less likely to stay to the end of Year 13 than A/AS students, the difference between these two groups being quite large. Bear in mind that this is after controlling for all the other variables in the model, including GCSE results. This suggests that there is a problem of retention with Level 3 vocational courses that is independent of the fact that the intake to these courses tends to have a lower attainment level than the intake to A level courses.

It is interesting to note that place of study in Year 12 was not significant in the model once other factors were included. This suggests that although FE colleges have lower crude retention rates than schools or sixth form colleges, they are just as good at keeping students as other types of institution if adjustment is made for the lower GCSE attainment of their intake and the type of courses that their students choose.

Chapter 3 gave some details about the discretionary Educational Maintenance Allowances (EMAs) that were received by 9% of Year 12 students in Cohort 9. These grants tended to be received by students with characteristics that put them at risk of leaving full-time education before the end of Year 13 - for example, their mean GCSE points score was 30, compared to a mean score of 44 for students who did not get an EMA.[40] The model suggests that having taken account of other factors affecting retention rates, EMAs had a modestly positive effect in encouraging Year 12 students to stay to the end of Year 13.

Another topic of current policy interest is the impact of part-time employment on students' performance. The model suggests that Year 12 students who had not held a job since the end of Year 11 were more likely to stay in full-time education until the end of Year 13 than students who had been doing paid work. This result needs to be interpreted cautiously, as it does not necessarily mean that paid employment has a

[40] The estimate for EMA recipients is based on a weighted sample N of 878, unweighted N 796, standard deviation 16.8. The estimate for non-recipients is based on a weighted sample N of 9,156, unweighted sample N 9,967, standard deviation 16.9.

detrimental effect on students' motivation towards their studies. It is also possible that some young people stayed in full-time education precisely because they had difficulty in getting a job, or that students who had already decided to leave full-time education at a particular point in the future took on part-time or holiday work in order to get experience and a foothold in their chosen field of work. The topic of part-time paid work undertaken by full-time students in Years 12 and 13 will examined in more detail in a future report in this series.

The last two predictor variables in the model measure attitudes in Year 12. They both had more or less the effects that would be expected. Students who said in Year 12 that they had got a place in education, training or work that they wanted were less likely to leave before the end of Year 13 than students who said that this was true only 'to some extent'. However the difference between students who got a place that they wanted and students who said that they had not got a place that they wanted, though in the expected direction, did not reach statistical significance. Finally, young people were asked four questions about their experiences in school in Years 10 and 11, where responses indicated either a positive or a negative attitude towards school. These were summed to form a scale with the range 0 - 4. Although these questions were supposedly about Years 10 and 11, responses were likely to be influenced by attitudes to full-time education in Year 12. The model showed that Year 12 students who gave four favourable responses were significantly more likely to stay to the end of Year 13 than students who gave no favourable responses.

Returners to full-time education

Having once left full-time education at age 16, it was fairly unusual to return within the next two years. Only 6% of young people who were not in full-time education at age 16/17 were in full-time education 12 months later, at age 17/18, and 6% of young people who were not in full-time education at age 17/18 were in full-time education 12 months after that, at age 18/19. In total, young people who returned to full-time education at either of these points formed 4% of YCS Cohort 9. Sample numbers for returners are too small to permit any very detailed analysis, but it seems likely that most went back into full-time education in order to take vocational courses at FE college.

The same factors that were associated with staying in full-time education after 16 also encouraged 16 year old leavers to return to full-time education. As Table 5.3 shows, the mean total GCSE points score of returners was higher than that of young people who were not in full-time education at all between the end of compulsory schooling and age 18/19 (termed here 'non-participants'), and 25% of returners had results in the top third of the national distribution compared to just 5% of non-participants. Young

Table 5.3
Characteristics of returners to full-time education compared to non-participants, YCS 9 (1998-2000)

		returners	non-participants
GCSE points score:			
	mean	34.2	23.0
	s.d.	17.1	14.7
% in bottom third of GCSE results		41	62
% in top third of GCSE results		25	5
% female		54	43
% ethnic minority		18	3
% black		6	+
% Indian		3	1
% Pakistani/Bangladeshi		6	1
% other ethnic minority		2	1
% with parents in higher level occupations (SOC 1-3)		29	15
% with parents in lower level occupations (SOC 8-9)		19	31
Weighted (Sweep 3) base N		*254*	*1601*
*Unweighted Base N**		*206*	*754*

Note: See text for the definitions of returners and non-participants.
* Excludes those with no information at Sweep 2 or Sweep 3.
+ 0.5% or less, but not zero.

women were more likely to return to full-time education than young men - they formed 54% of returners but only 43% of non-participants. Young people from ethnic minorities were also over-represented amongst returners, particularly young black people and those of Pakistani or Bangladeshi origin, who it will be remembered were a little less likely to stay in full-time education at 16 than young people of Indian or 'other' ethnic origins.[41] Finally, young people who had parents in higher level occupations were over-represented amongst returners compared to non-participants, and those with parents in lower level occupations were under-represented.

[41] See Chapter 3.

6 POLICY ISSUES

This brief concluding chapter highlights some of the findings discussed earlier in the report that may be of particular interest to policy makers.

Rates of participation in full-time education after 16

The level of participation in full-time education amongst 16-18 year olds in the UK is low compared to many European countries. Although GCSE results have continued to improve in recent years, since the mid-1990s they have not been matched by increasing participation rates. A particular cause for concern is the declining participation rates of young people with good, but not top, GCSE results. This would matter less if the proportion of young people getting formal work-based training were increasing, but this is not the case. On the contrary, the original growth in educational participation was associated with a decline in work-based vocational training for young people, and in recent years the proportion of the age group getting work-based training has remained more or less static.

Low achievers

While the rise in staying on rates for young people with good GCSE results has been halted or even reversed, staying on rates for young people with poor GCSE results continue to climb. Meeting the needs of such students can present post-16 institutions with difficulties - particularly FE colleges, where low-achieving students tend to be concentrated, and particularly if some students have stayed in full-time education only because they cannot find the job or training place that they want. Many Year 12 students with poor GCSEs are on Level 1 or Level 2 vocational courses with high drop-out rates. If they do not secure a qualification, then the value these courses to them must be questioned.

Minority ethnic groups

All minority ethnic groups show a strong commitment to education. Their staying on rates are well in excess of rates for whites, and, having made allowance for differences in GCSE results, they are more likely than whites to choose academic

rather than vocational courses. Ethnic minority Year 12 students are more likely than whites to stay in full-time education until the end of Year 13, and even those who leave full-time education at age 16 are more likely than whites to return at a later date. For certain minority ethnic groups, notably those of Indian origin, this commitment is matched by outstanding levels of attainment in GCSEs. However for young black people and those of Pakistani or Bangladeshi origin there is a huge disparity between the level of their commitment to education and the level of attainment that they reach. This disparity is of particular concern as there is no sign that the gap in GCSE results between them and young white people has grown any smaller in the last decade.

Home background

Young people with very good GCSE results are very likely to stay in full-time education after age 16 regardless of their home background, but for young people whose GCSE results are not so good, home background has a big effect. Young people from disadvantaged home backgrounds are not only more likely to leave full-time education at 16 than young people who are more fortunately placed - if they do stay on, they are more likely to opt for vocational rather than academic qualifications and less likely to remain in full-time education until the end of Year 13. The relationship between educational participation and home background has been much studied by educationalists and sociologists, and is being addressed by a range of initiatives including the current experiments with mandatory Educational Maintenance Allowances (EMAs). It continues nonetheless to present a challenge to policy.

Region

Regional differences in educational participation are very wide but have attracted relatively little attention. They persist even after adjusting for regional differences in GCSE results, and like differences between young people from different home backgrounds, are particularly important for young people who do not have good results. YCS sample numbers are too small to calculate participation rates for areas smaller than regions, but official statistics show even wider disparities at the sub-regional level. In 1997/98 participation in full-time education by 16 year olds in the Local Education Authority (LEA) with the highest participation rate, at 94%, was almost twice as great as participation in the LEA with the lowest rate (49%).[42] The links between local structures of educational provision, the local labour market for young people, local social and economic conditions and local cultural norms need to

[42] DfEE 1999, paragraph 26.

be much better understood than they are at present if geographical inequalities in educational participation are to be tackled.

Educational Maintenance Allowances

The discretionary EMAs that were available before the current pilots of mandatory EMAs began appear to have had a modestly positive effect in encouraging full-time Year 12 students to stay to the end of Year 13. This finding accords with the positive results that are beginning to emerge from the EMA pilots.

A levels and Level 3 vocational courses

Though Level 3 GNVQs were intended to have parity of esteem with A levels, it is clear from the fact that students on Level 3 vocational courses have on average much poorer GCSE results than A/AS level students that this is not the case. It is a matter of concern that, after adjusting for GCSE results and other relevant factors, Level 3 vocational students are less likely to complete their courses than A level students.

REFERENCES

Department for Education (1994) *Participation in Education by 16-18 Year Olds in England: 1983/84 to 1993/94.* Statistical Bulletin 10/94.

Department for Education and Employment (1999) *Statistics of Education: Participation in Education and Training by Young People Aged 16 and 17 in each Local Area and Region, England, 1993/94 to 1997/98.* London: The Stationery Office.

Department for Education and Employment (2001) *Youth Cohort Study: The Activities and Experiences of 16 Year Olds: England and Wales 2000.* National Statistics First Release, SFR 02/2001.

Department for Education and Skills (2001) *Participation in Education, Training and Employment by 16-18 Year Olds in England: 1999 and 2000.* National Statistics First Release, SFR 30/2001.

National Centre for Social Research (1999) *Youth Cohort Study Cohort 9 Sweep 1 (C9S1): Technical Report.* London: The National Centre for Social Research.

Payne, J. (1998) *Routes at 16: Trends and Choices in the Nineties.* Department for Education and Employment Research Report RR55.

Payne, J. (2001) *Student Success Rates in Post-16 Qualifications.* Department for Education and Skills Research Report.

RSGB (2000) *Youth Cohort Study Cohort 9 Sweep 2 (C9S2): Technical Report.* London: Taylor Nelson Sofres (RSGB).

RSGB (2001a) *Youth Cohort Study Cohort 9 Sweep 3 (C9S3): Technical Report.* London: Taylor Nelson Sofres (RSGB).

RSGB (2001b) *Youth Cohort Study Cohort 10 Sweep 1 (C10S1): Technical Report.* London: Taylor Nelson Sofres (RSGB).

APPENDIX 1

CALCULATING THE PROPORTION OF THE AGE GROUP IN FULL-TIME EDUCATION

The estimates of participation in full-time education at age 16/17 that are quoted in this report differ slightly from those that are quoted in DfES Statistical First Releases (SFR) on YCS results. The differences arise from the structure of the YCS questionnaire, which asks about the respondents 'main activity' at the time of survey and also, at a later point in the questionnaire, about any full-time education courses that respondents are enrolled on. DfES estimates are based solely on the 'main activity' question, whereas the estimates given in this report also count young people as being in full-time education if they do not give 'full-time education' as their main activity but nevertheless say that they are enrolled on a full-time education course. Different answers to these two questions are not necessarily incompatible because the survey period spans the Easter holidays, when young people in full-time education may give their main activity as a (temporary) full-time job or as 'doing something else' (other than education, work or training). The method of classification used in this report has been adopted for the sake of consistency with earlier reports in this series, so that trends over time can be presented on as uniform a basis as is possible, given the changes in questionnaire design over the years.

Apart from the difference already described, there are also other differences in the way that the main activity at age 16/17 is derived from the YCS data in this report and the way that it is derived in the DfES SFRs on YCS (see, for example, Table C of SFR 02/2001, DfEE 2001). In the case of Sweep 1 of YCS Cohort 10, the present report adopts the following procedures not used for the SFR estimates:

1. Respondents are allocated to a part-time or casual job if they have no information elsewhere on their activities or say that their main activity is being unemployed or doing something else, but say at Q52a that they did part-time or casual work in the previous week.
2. Even if they say that their main activity is full-time education, respondents are allocated to government-supported training (GST) if they say at Q39 that they are in GST, and at Q41 that their training is part of a full-time or part-time job.

The DfES also publishes official estimates of participation in full-time education in England that are based on the Schools' Census, the Individualised Student Record of the Further Education Funding Council, and the Higher Education Statistics Agency Student Record. YCS estimates of the proportion of young people who continue in full-time education after 16 are bound to differ slightly from these estimates, as they

are survey rather than census based, cover England and Wales rather than just England, exclude special schools, and relate to a fairly broad time period in the spring of the academic year rather than to specific census dates earlier in the academic year. Nevertheless the YCS estimates for participation rates over time given in this report track official estimates quite closely, as Table A1.1 shows.

Table A1.1
Proportion of young people in full-time education at age 16/17, 1989-2000: YCS estimates (current report) and official DfES estimates compared

	YCS Cohort						
	4 1989	5 1991	6 1992	7 1994	8 1996	9 1998	10 2000
YCS estimate	47.7	58.4	66.1	71.8	71.6	70.8	71.6
DfES official estimate	51.5	59.3	66.6	72.6	70.4	69.4	71.2

Sources for official DfES estimates: DfE 1994, DfES 2001. See text for differences in the way that the two sets of estimates are calculated.

When YCS estimates of participation are broken down by region, sampling fluctuation of course increases, and so the differences with official estimates are greater. Table A1.2 compares the YCS estimates for spring 1998 presented in this report with official estimates for the academic year 1997/98. The overall rank order of regions by level of participation is very similar in the two sets of estimates. Although the YCS estimates are generally a little higher than the official estimates, only in London do the two differ by more than three percentage points. This may be because survey response rates are usually lower in London than in other regions, and so response bias (which in YCS tends to lead to participation being over-estimated) is likely to be greater in London than elsewhere.

Table A1.2
Proportion of young people in full-time education at age 16/17 by region, 1997/98: YCS estimates (current report) and official DfES estimates compared (England only)

	YCS estimate	DfES offical estimate
North East	60.5	60
North West	65.3	65
Yorks & Humber	66.4	64
West Midlands	68.5	66
East Midlands	68.6	66
South West	71.9	73
Eastern	73.7	73
South East	75.6	75
London	80.5	75

Source for official DfES estimates: DfE 1999. See text for differences in the way that the two sets of estimates are calculated.

APPENDIX 2

RECENT REPORTS IN THE DfES RESEARCH SERIES BASED ON THE ENGLAND AND WALES YOUTH COHORT STUDY

Payne, J. *Work-based training for young people: Data from the England and Wales Youth Cohort Study.* Department for Education and Employment Research Series, RR276 2001

Payne, J. *Student success rates in post-16 qualifications: Data from the England and Wales Youth Cohort Study.* Department for Education and Employment Research Series, RR272 2001

Payne, J. *Young people not in education, employment or training: Data from the Youth Cohort Study.* Department for Education and Employment Research Report, RR201, May 2000.

Payne, J.. *Progress of low achievers after age 16: An analysis of data from the England and Wales Youth Cohort Study.* Department for Education and Employment Research Report RR185, February 2000.

Payne, J. *Routes at 16: Trends and Choices in the Nineties.* Department for Education and Employment Research Report RR55, 1998.

Cheng, Y., *Staying on in Full-Time Education after 16: Do schools make a difference?* Department for Education and Employment Research Series Youth Cohort Report No. 37, 1995.

Cheng, Y., Payne, J. and Witherspoon, S., *Science and Mathematics in Full-time Education after 16.* Department for Education and Employment Research Series Youth Cohort Report No. 36, 1995.

Payne, J., *Options at 16 and Outcomes at 24: A comparison of academic and vocational education and training routes.* Department for Education and Employment Research Series Youth Cohort Report No. 35, 1995.

Casey, B. and Smith, D., *Truancy and Youth Transitions.* Department for Education and Employment Research Series Youth Cohort Report No. 34, 1995.

Witherspoon, S., *Careers Advice and the Careers Service: The experiences of young people.* Employment Department Research Series Youth Cohort Report No. 33, 1995.

Payne, J., *Qualifications Between 16 and 18: A Comparison of Achievements on Routes Beyond Compulsory Schooling* Employment Department Research Series Youth Cohort Report No. 32, 1995.

Payne, J., *Routes Beyond Compulsory Schooling* Employment Department Research Series Youth Cohort Report No. 31, 1995.