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UNEXPECTED SUCCESS AND FAILURE IN OBTAINING QUALIFICATIONS

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Contents. Paragraphs

others were not. Further analysis will need to bear in mind, for example, the local opportunity structures, as well as examining the social and personal characteristics of those who were unexpectedly successful.

Introduction.

9. The extent of stability and change in educational performance is a major issue in the practice and theory of education. There is a large amount of literature and debate on this including a number of contributions to a recent collection of papers from the NCDS (Fogelman 1983).

10. Essen et al (1978) investigated the degree of continuity or change in educational performance between the primary and secondary school years of those in different bands of attainment. While stability in performance was the rule, there was also considerable movement, especially in the primary school years. In line with this stability, Hutchison et al (1979) found the strongest predictor of educational performance at 16 to be performance at an earlier age.

11. Of special importance in this context are, firstly, those who depart from the conventional pattern of stability in performance and, secondly, the pattern of achievement after leaving school. (Rutter and Madge 1976, P309,325).

12. To study these issues data are needed which cover a long period in the lives of children into adulthood. The NCDS is well suited to this, covering, as it does, from birth to age 23. Continuities and discontinuities in school attainment between the ages of 7 and 16 have already been examined (Essen et al 1978). The purpose of this report is to investigate these continuitues and discontinuities between school performance up to the age of 16 and subsequent qualifications after 16 and up to the age of 23. This is not carried out for the whole cohort but for two groups of special interest at the extremes of the performance spectrum.

13. Taking those with consistently high or low attainment test scores up to age 16, the focus is on those who subsequently did worse or better than expected in terms of the qualifications achieved. These 'unexpectedly failed' and 'unexpectedly successful' groups are then examined mainly in terms of their experiences from age 16 onwards. Clearly, the reasons why some do worse and others do better than expected are many and the outcomes arise out of an interaction between various aspects of the respondents' lives over a long period of time. This report explores the following: basic demographic characteristics; public examinations at 16; leaving school and details of post-school education courses and work related education (apprenticeships and training); and finally the characteristics of the secondary schools which the respondents attended at 16 and some aspects of their experiences while there.

Measures used

14. The main measures used in this study were: tests administered in the children's schools when they were aged 7, 11 and 16 and the highest qualifications the respondents reported they had gained by age 23.

15. The reading and mathematics tests administered by teachers during the school years were:

    7-year reading attainment: Measured by the Southgate reading test (Southgate, 1962), a standardised test of word recognition.

    7-year arithmetic attainment: Measured by a problem arithmetic test constructed for use in this study by the NFER.

    11-year reading attainment: Measured by a test constructed by the NFER to be parallel with the Watts-Vernon test of reading comprehension.

    11-year mathematics attainment: Measured by a test constructed by the NFER for this study and containing a mixture of problem and mechanical items.

    16-year reading attainment: Measured by the same test as at 11.

    16-year mathematics attainment: Measured by a test constructed by the NFER for use with this age group.

16. The highest qualification grading followed the General Household Survey hierarchy of qualifications. This consists of 16 categories ranging from no qualifications to higher degree qualifications. Thus, in addition to academic qualifications, they include vocational qualifications and those obtained from professional bodies. They have all been used to assess an individual's highest qualification and appendix A shows the hierarchy used to order the qualifications.

These could have been obtained in connection with a job in which case, in this report, they are referred to as 'work related' qualifications obtained from training courses or apprenticeships or from 'work related' activities/experiences/education. Additionally, qualifications could also have been from education courses undertaken outide of work and in this case thay are referred to as simply educational qualifications obtained from 'education' courses or 'non-job related' activities/experiences/courses.

Definitions of the groups

17. Four groups were defined for the purposes of this project. These have been formed from a combination of educational performances at the ages of 7, 11 and 16 on the one hand and highest qualifications achieved by age 23 on the other.

18. The four groups were defined as follows:

Group 1 (Expected successes): High test performance at 7, 11, 16; high subsequent qualifications

Group 2 (Unexpected failures): High test performance at 7, 11, 16; low subsequent qualifications

Group 3 (Unexpected successes): Low test performance at 7, 11, 16; high subsequent qualifications.

Group 4 (Expected failures): Low test performance at 7, 11, 16; low subsequent qualifications.

19. High performance at the ages of 7, 11 and 16 was taken to mean attainment in the top 30 per cent category of mathematics or reading tests at all three ages. In cases of pupils whose performance at any one age differed sharply on the two tests, only those who performed, at all ages, in the top half of the age group were included provided that they were always in the top 30 per cent on one test.

20. Low performance at the ages of 7, 11 and 16 was taken as attainment on the reading or mathematics tests in the bottom 40 per cent at all three ages. As above, in the cases of sharply different results on reading and mathematics, only those in the bottom half of the age group were included provided that they were always in the bottom 40 per cent on one test. The criteria for the high and low performance groups, by insisting on high or low performace at all three ages, eliminate respondents who by chance have a good (or bad) performance at any one age.

21. High and low subsequent qualifications were defined differently for the different school performance groups. As seems reasonable, those with high school performance were deemed to have failed at a higher level of subsequent qualifications than the cut-off adopted for those with low school performance. The definitions were as follows:

    High subsequent qualifications were taken to mean obtaining at least one 'A' level or equivalent qualification by the age of 23 if the subjects had been in the high school performance group. If the respondents were in the low school performance group then high subsequent qualifications were taken to be achieving at least five 'O' levels or equivalent.

    Low subsequent qualifications were any qualifications below the criterion for high qualifications. That is, having less than one 'A' level (or equivalent) if in the high performance group and less than five 'O' levels (or equivalent) if in the low performance group.

22. Using the above criteria, the size of the groups is shown in Table 1 and can be summarised as follows.

23. Taking those with consistently high performance at 7, 11 and 16 first, the results are:

		Group 1	Group 2
	All with high performance at 7,11 & 16	(Expected successes) Achieving at least 1 'A' level or equivalent	(Unexpected failures) Achieving less than 1 'A' level or equivalent
N	1174	926	248
% of group	100%	79%	21%
% of cohort	15%	12%	3%

Altogether 35 percent of the cohort achieved at least one 'A' level or an equivalent qualification. Thus, as the high performance group constitute 15 percent of the cohort, a 'failure' in this group would mean those in the top 15 percent of the age group on tested attainment failing to subsequently achieve qualifications obtained by the top 35 percent.

24. Taking the consistently low scorers, the results of Table 1 can be summarised thus:

		Group 3.	Group 4.
	All with low performance at 7,11 and 16.	(Unexpected successes) Achieving at least 5 '0' levels or equivalent	(Expected failures) Achieving less than 5 - '0' levels or equivalent
N	1427	241	1186
% of group	100%	17%	83%
% of cohort	19%	3%	16%

In the cohort as a whole, 49 percent have qualifications equivalent to five '0' levels or more. Thus 'success' in the low performing group means those in the bottom 19 percent of the age group on tested attainment subsequently achieving qualifications obtained by the top 49 percent.

25. It needs to be added that, as is clear from Table 1, the unexpected failures or successes do not always perform as badly or as well as the expected failures or successes but do sufficiently badly, or well, to fall into the broad categories as defined here. Nevertheless, the unexpectedly successful or failures are remarkable as they constitute about one-fifth of rather extreme groups at the bottom and top of the age group. It is therefore likely that there would have been correspondingly firm expectations of subsequent failure or success of these groups which were not fulfilled.

26. The remainder of this report is concerned with examining the characteristics and experiences of the groups delineated above. These are: test scores and some general characteristics (sex, social class, region); public examinations at 16; post school education, apprenticeships and training experiences; education experiences and post-school education courses leading to their highest post-school educational qualification; work related experiences and apprenticeship or training leading to their highest qualification in these; and finally characteristics of the schools the respondents attended at age 16.

Test scores and general characteristics (sex, social class, region)

27. As the groups have been delineated to be equivalent, using bands of performance on the test scores, it is important to examine their average scores in case of large discrepancies. Table 2 shows the means for reading and mathematics for the four groups at 7, 11 and 16.

28. It is clear that there are no differences between groups 1 and 2 (expected successes, unexpected failures), or groups 3 and 4 (unexpected successes, expected failures) at the age of 7. There are statistically significant differences at the ages of 11 and 16 on both tests which range from about one tenth to half a standard deviation in the expected direction i.e. the subsequently successful groups having higher scores

at these earlier ages. Though significant, these differences are quite small and could not account for the subsequent variations between the groups. Additionally, in all cases, the high and low scoring groups score well above and well below the cohort average respectively.

29. Table 3 shows the sex differences between the groups. These exist in favour of men in both the high performing (groups 1 and 2) and low performing groups (3 and 4). The differences are quite large, especially in the low performance groups. While the unexpected failures contained 9 percent more females than the expected successes, the expected failures had 34 percent more females than the unexpected successes. It is also noteworthy that 78 percent of the unexpected successes were men and only 22 percent women.

30. Table 4 shows the social class of the respondents at 16 as measured by that of the male head of household using the Registrar General's Classification of 1966. The social class differences are not as striking as perhaps would have been expected. The largest differences were between the expected successes and the unexpected failures. More of the unexpected failures were in the skilled manual class and less were in the professional and intermediate non-manual classes. The same was the case for the low performing groups (3 and 4) i.e. the successful group being from a higher social class, although the non-manual difference was taken up by an excess of semi- and unskilled manual classes in the expected failure group (group 4).

31. Table 5 shows the regional distribution of the groups (taken as region of residence at 16). The notable differences are: an excess of group 1 (expected successes) in Scotland with a corresponding excess of group 2 (unexpected failures) in the North and the Midlands; a possible excess of group 3 (unexpected successes) in the South with the differences spread across the other regions in group 4 (expected failures) although this difference is not statistically significant.

Public examinations by age 16.

32. In this section the public examination entries and results of the groups, at the age of 16, are described. This is the first stage in the progression to higher qualifications and the only stage when large numbers of children take public examinations. Thus it is important to see if the differences between the groups were due to failure at this stage or if they emerged later.

33. In 1977/1978 schools and other educational institutions were contacted in order to obtain details of public examination entries and results (CSE, GCE, 'O' and 'A' levels, and Scottish equivalents). The data used here refer to examinations by the age of 16. In the majority of cases this was the period just after the last NCDS tests were taken although a few would have taken some examinations before the NCDS tests.

34. The results are described first for the high performance groups (1 and 2) and later for the low performance groups (3 and 4). Furthermore, except for an overall count of number of entries, the results for England and Wales have to be separated from those in Scotland because of the difference in the examination systems. In practice, because of the small number of subjects in the two main groups of interest in Scotland, the Scottish children are omitted from the examination tables after Table 6.

The unexpected failures.

35. Tables 6 to 8 show the total number of public examinations entered as well as the number of 'O' levels and CSEs shown separately. It is clear that a large number of those in group 2 (unexpected failures) were entered for examinations. However, already by this stage, compared with group 1 (expected successes), fewer were entered in total and for 'O' levels but more for CSEs. This pattern is reflected in actual results obtained as shown in Tables 9 to 12. That is, number of passes at 'O' level (grades A - C and CSE grade 1), number of

grade As at '0' level, and results in English and Mathematics. Those in group 2 have a wide range of performance on all these measures but consistently fail to reach the levels achieved by those in group 1. Thus, it seems that by the age of 16, and the time of first public examinations, those in group 2 (unexpected failures) were already not doing as well as those in group 1 (expected successes).

The unexpected successes

36. A different picture emerges for the unexpected successes (group 3) in terms of their examination entries and results. That is, although more, compared with the expected failures, were entered for examinations (mostly CSEs) and more gained qualifications, the differences are not very striking and certainly their subsequent success cannot be said to be apparent at this stage (Tables 6 - 12). Thus a few more (compared to group 4) were entered for '0' levels and substantially more for CSEs. However, although more obtained one or two '0' levels, a large number failed to obtain '0' level grades A - C or CSE grade 1s in English or Maths. In fact only three percent obtained an '0' level grade C or CSE grade 1 in English despite 70 percent of them being entered for the subject (Table 11). None achieved this level for maths despite 51 percent of this group being entered for the subject. (Table 12).

37. To summarise the public examinations results up to 16, it seems that the unexpected failures are already doing less well (compared to the expected successes) at this stage. The unexpected successes, however, despite doing a little better than the expected failures at this stage, were not showing their subsequent success in their public examination entries and results at 16. Thus the subsequent failure of the unexpected failures is partly apparent at this stage but the subsequent success of the unexpected successes is barely so. It seems, therefore, that examinations at 16 are fairly important in differentiating between the expected successes and unexpected failures but that they are not so important for the unexpected successes and expected failures. For the unexpected successes the post 16-year experiences are of crucial importance.

Post-school Experiences.

38. This section mainly deals with the experiences which would have led to obtaining qualifications after leaving school. The aim is to see what was achieved in the area of education and work related education (apprenticeships and training) and what were the nature of these experiences. For some, post-school education would have been the main avenue for gaining qualifications while for others it would be through the job related activities of apprenticeships and/or other training .

39. As we do not have detailed data on courses taken at school nor about the respondents' schools after 16, the main emphasis will be on post-school educational and work related experiences. Before describing the respondents' education courses, apprenticeships or training courses, we first outline their broad experiences around the time of leaving school and after.

40. Table 13 shows the school (or 6th form college) leaving age of the groups. It is clear that a large proportion of all the groups, except the expected successes, left school at 16. Although more of the unexpected failures, compared to the expected successes, left at 17, only 12 percent of the former left at 18 or later compared to 74 percent of the expected successful group.

41. Even fewer respondents stayed at school in the unexpected successes and expected failure groups. Though more of the unexpected successes stayed at school after 16, the difference is not large. It is clear that the majority of the unexpected successes did not obtain their subsequent qualifications at school.

42. The school leaving age results described above are clearly reflected in the results for age of termination of continuous education (Table 14). The main point of interest is the large number of the unexpected successes leaving education early.

43. Table 15 shows the respondents' experiences of education, apprenticeships and training after school irrespective of whether they gained qualifications on them. Training is defined as any course lasting at least 14 days or 100 hours undertaken in connection with the respondent's jobs.

44. Comparing groups 1 and 2 (Table 15) it seems that more of those in the unexpected failures either do not have any further education, apprenticeship or training experiences at all or more have only training or only apprenticeships. The differences are taken up by fewer having just education courses or a mixture of at least two of education, apprenticeship or training.

45. Comparing groups 3 and 4 (Table 15) the notable result is the large number of the unexpected successes pursuing apprenticeships and, to a far lesser extent, a mixture of education, apprenticeships, or training. The difference is mainly taken up by the large number of the expected failures who did not have any such experiences after school.

46. Table 16 shows the source of the highest qualification obtained by each respondent in the various groups. It is clear that over half of the unexpected failures obtain their highest qualification at school and only 25 per cent through an education course after leaving school. Thus, for whatever reasons, post-school education is clearly not a large part of the experience of this group in contrast to the majority (70 percent) of the expected successes. It can also be seen from Table 16, that the majority of the unexpected successes gain their qualifications from work related education (i.e. apprenticeships and training) and particularly from apprenticeships. Clearly, school or post-school education courses were not a significant path to qualifications for this group. As for the expected failures, 81 percent of this group did not achieve higher qualifications, by any means, after leaving school.

Thus, in a rather similar but more extreme sense to the unexpected failures, a large number of this group did not have any post-school experiences which gave them any qualifications.

47. We now turn to describe in more detail the post school education and work related experiences of the groups. First, the education experiences and the post school education course leading to the highest qualification obtained from education courses are described. Next, job related experiences are explored and the apprenticeship or training course which led to the highest qualification amongst these are described. This is done first for the unexpected failures and separately for the unexpected successes. In what follows, post school education and job related educational experiences are separated and the highest qualification course within <u>each</u> area is described so as to give a wider account of the respondents' experiences. Future analyses could select and describe the education course, apprenticeship or training course leading to the highest qualification amongst <u>all</u> of these.

<u>Education Courses</u>.

48. In this section first the overall experiences of the groups, in relation to post-school education courses, are described and compared. We then move on to compare the education courses in each group which led to the highest qualification from such courses. These analyses are limited to those with some experience of post-school education courses. If the whole group was included the results would have been dominated by the large proportion in the 'failure' groups who had not taken any courses as would have been expected from the definition of these groups.

Unexpected failures

49. Tables 17 to 20 show the number, type, and results of the education courses undertaken by the expected successes and unexpected failures who had had some post-school education. It can be seen that the unexpected failures took fewer courses overall, and also fewer full-time and part-time courses (although the latter is not statistically significant). In terms of their results, more of the unexpected failures had failed one or more courses (Table 20). Indeed, nearly 50 percent of this group had had one or more failed education course. Future analysis could investigate these failed courses.

50. Table 21 shows the highest qualification achieved on post-school education courses. A large number in the unexpected failures only achieve below 'O' level qualifications,one third of these being in technical/business qualifications. Of those with 'O' level standard qualifications 12 had 'O' level or Scottish equivalents, 20 had RSA and 1 had a craft qualification. (Appendix A).

51. As regards the subject of the highest education course, Table 22 shows that the unexpected failures more often did courses in Social Administration Business and miscellaneous professional and Vocational subjects and less often in Education, Health, Engineering, Science or Agriculture.(See Appendix B for the list of subjects).

52. Tables 23 and 24 show the starting age and length of the highest education course of the groups. Compared to the expected successes, far more of the unexpected failures start their courses at an earlier age and many do shorter courses.

53. Table 25 shows that the highest qualification course of the unexpected failures was probably less often a full-time or a sandwich course and more often an evening course. During their full-time or sandwich courses, far more of the unexpected failures than of the expected successes did not get a grant, and far more had an income from working. (Tables 26 and 27)

54 The highest qualification courses of the unexpected failures were more often in further education, technical colleges, private institutions and other institutions, as opposed to universities or polytechnics (Table 28). This clearly reflects the lower qualifications of the unexpected failure groups.

55. The differences in proportions undertaking their education course 'with a job in mind' were not statistically significant (Table 29); but more of the unexpected failures felt the course made no difference to their long term job prospects (Table 30).

Unexpected successes

56. Again, taking those with some education courses, the total number of these, or number of full-time or part-time courses, did not differ significantly between the unexpected successes and the expected failures (Tables 17 to 19). However, more of those in the unexpected successful group had passed all their education courses (Table 20).

57. Table 21 shows the qualifications obtained from the highest qualification course in education. The categories are broad because of cell sizes but it can be seen that over 50% of the unexpected successes achieve qualifications of 'A' level standard and above from such courses. Of these, 2 were degrees, of a further three there were one in each of non-graduate teaching, medium professional and nursing categories, 17 were in technical or higher technical categories and 2 had 'A' levels or Scottish equivalents. Of the 19 with 'O' levels or equivalents, 5 had 'O' levels or Scottish equivalents, 4 had RSA and 10 had craft qualifications. (Appendix A).

58. As regards the subject of the highest education course, Table 22 shows these to be more in Engineering/Technology/Science/Agriculture and Miscellaneous Professional groups. The numbers are small but there seems to be fewer from group 3 in the Social administration and Business category. (See Appendix B for the list of subjects).

59. There are no differences between the unexpected successes and expected failures in the age of starting their highest education courses (Table 23). However, many more of the unexpected successes did longer courses (Table 24).

60. Most of the highest education qualification courses were full-time or sandwich courses and on this groups 3 and 4 did not differ (Table 25). Comparison in other categories is difficult because of small numbers, but it might be interesting to note the 7 percent in group 3 in the Open University/correspondence course category.

61. More of those in the unexpected successful group had a grant for their full-time/sandwich courses compared to the expected failures (Table 26). However, similar proportions had income from work on these courses. (Table 27)

62. As for the place of their highest education qualification course Table 28 shows that, compared to group 4, there are indications that more of the unexpected successes went to Technical Colleges and less to Further Education Colleges. Any difference here is quite likely to be due to nomenclature and is not statistically significant.

63. There were no differences between groups 3 and 4 in whether they had taken the course 'with a job in mind' (Table 29) but more of the unexpected successes thought the course improved their long term job prospects 'a lot' (Table 30).

Apprenticeship and training

64. Before going on to considering the apprenticeship or training experiences of the respondents, it is necessary to examine the overall picture in these job related activities.

65. We have already seen from Table 15 that although equal proportions of the unexpected failures undertook education and work related activities they were nevertheless partly characterised by more job related activities of apprenticeships and training compared to the expected successes. More striking however, were the much higher proportions of the unexpected successes who undertook such work related activities in this group as well as when compared with the expected failures. Taking only the sub-group who had had an apprenticeship or training, Table 31 shows the mixture of these experiences amongst this sub-group. (It needs to be added that the sub-groups presented in Table 31 i.e. those with some work related experience, comprise 41 percent, 48 percent, 86 percent and 29 percent of groups 1, 2, 3 and 4 respectively).

66. It can be seen from Table 31 that more in the unexpected failures group compared to the expected successes, did only training or only apprenticeships and less did a mixture of education, apprenticeship or training. Those in the unexpected success group also had more combinations, compared to the expected failures, but more had only apprenticeships as well.

67. It is clear that job related experiences leading to qualifications are not so material in the unexpected failures as in the unexpected successes. These experiences have been major sources of gaining qualifications by the unexpected successes. Thus, in what follows, a brief account of the apprenticeship and training experiences of the unexpected failures is given before moving on to those of the unexpected successes.

Unexpected failures.

68. Tables 32 to 34 show that, taking those with some work related education experiences (under half of each group), there were no differences in the total number of apprenticeships or training courses, nor in the number of these considered separately, between the

unexpected failures and expected successes. Similarly, there were no differences in either the total number of failures in apprenticeships and training, nor in the number of failures for these taken separately (Tables 35 to 37).It is as well to point out that in this report failing a course in used to denote the more generall outcome of non-completion, which could be due to a number of reasons. The word failure is not intended to imply that these were necessarily within the individuals control.

69. Table 38 shows the highest qualifications obtained from training or apprenticeships. It can be seen that 26 respondents in the unexpected failures have '0' level or equivalent qualifications. Of these, 16 were craft qualifications, 5 were RSA and 5 were '0' levels or Scottish equivalents. (Appendix A)

70. Table 39 shows that more of the unexpected failures, compared with the expected successes, obtained their highest work related qualifications from apprenticeships rather than from training, although they still only constituted 38 percent of the whole group.

71. We now turn to describing, first, the apprenticeship and next the training course which led to the respondents' highest qualification from job related experiences. As only small numbers of the unexpected failures had apprenticeships, the cell numbers in some of what follows are small and caution is needed in interpreting them.

Apprenticeship leading to highest qualification from amongst apprenticeships or training.

Unexpected failures

72. Fourteen out of 21 respondents in the unexpected failure groups, whose highest work related qualifications were from apprenticeships, obtained 'O' level standard qualifications (Table 40) with 75 percent of the group being in trades categorised as material processing, making and repairing (including metal and electrical) (Table 41).

73. The unexpected failures also had apprenticeships which, compared to those in the expected successes, may have started earlier but were of a similar length (Tables 42 and 43); were probably more often block rather than day release (not statistically significant) (Table 44), and which were perhaps less often thought to have improved their long term job prospects 'a lot' (not statistically significant - Table 45).

Training course leading to highest qualification from amongst apprenticeships or training.

Unexpected failures.

74. Twelve out of 35 respondents in the unexpected failure group, whose highest work related qualification was from training courses, obtained 'O' level standard qualifications (Table 46). Of these 5 were 'O' levels or equivalent, 5 were RSA and 2 were craft qualifications. (Appendix A). These were mostly in the Social administration/Business category (Table 47). Indeed, the pattern of subjects taken on training courses in groups 1 and 2 follow that of the highest education courses for these groups (Table 22).

75. The unexpected failures also had training courses leading to their highest work related qualification which, compared to those of the expected successes: were undertaken at a younger age (Table 48); were

shorter (Table 49); were more often full-time rather than day release (Table 50); did not differ in terms of the place where the course was taken (Table 51) and were less often thought to have improved their long term job prospects 'a lot' (Table 52).

76. We now turn to examining the apprenticeship and training experiences of the unexpected successes group.

Apprenticeship and training

Unexpected successes

77. Table 32 shows that, taking those with some apprenticeships or training, the unexpected successes did not differ, from the expected failures, in the total number of such experiences. However, more of the unexpected successes did apprenticeships and fewer did training courses (Tables 33 and 34).

78. A large difference between the unexpected successes and expected failures is in the proportions failing apprenticeships and training courses (Tables 35 - 37). Indeed, of those taking an apprenticeship, 64 percent of the expected failures failed an apprenticeship compared to five percent in the unexpected successes. Fewer failed training courses, and the contrast was 21 percent versus seven percent. Future analysis could explore these failed apprenticeships and training courses of the expected failures group. Uncompleted appreticeships in the whole cohort have been examined in working paper number 18.

79. Table 38 shows the qualifications obtained on work related activities. Of the 24 respondents in the unexpected successful group with above 'A' level standard qualifications, 14 held nursing qualifications, 9 had qualifications in the 'higher technical' category (City and Guilds 'full technical/insignia, HNC/HND, TEC/BEC higher), and one had a 'medium level' professional qualification (below degree but above 'A' level standard). All of the 79 with 'A' level standard

qualifications, had technical qualifications (City and Guilds advanced, ONC/OND, TEC/BEC certificate). There were also 87 of 'O' level standard qualifications in the unexpected successes and 86 of these had craft-type qualifications. (City and Guilds Craft, JIB Craft) and one had a RSA qualification.(Appendix A).

80. Most of the unexpected successes obtained their highest work related qualification from apprenticeships (Table 39) i.e. 73 percent versus 28 percent in the expected failures.

81. We now turn to describing first the apprenticeship and next the training course which led to the unexpected successes' highest qualification from these job related activities

Apprenticeship leading to highest qualification from amongst apprenticeships or training.

Unexpected successes.

82. Considering the qualifications obtained from the apprenticeship leading to the highest work related qualification, Table 40 shows that those with qualifications above 'A' level standard were least likely to obtain these from apprenticeships. The eight who do, in fact have qualifications in the higher technical category (City and Guilds full technological/insignia, HNC/HND, TEC/BEC higher). All 66 respondents with 'A' level standard qualifications were in the technical category (City and Guilds advanced, ONC/OND, TEC/BEC certificate). The 67 with 'O' level standard qualifications were all in the craft category (City and Guilds Craft, JIB craft). (Appendix A).

83. The majority of the apprenticeships were in materials processing/making and repairing (including metal and electrical) trades (Table 41).

84. The unexpected successes also had apprenticeships which, compared with those in the expected failure group: started at the same age and were of similar length (Tables 42 and 43); were more often day or block release (Table 44); but were not seen to differ in how helpful the apprenticeship had been to their long term job prospects (Table 45).

Training course leading to highest qualification from amongst apprenticeships or training.

Unexpected successes.

85. Taking the training course leading to the highest work related qualifications, Table 46 shows the qualifications obtained. Of the 16 respondents in the unexpected successes group with above 'A' level standard qualifications, 14 were in nursing, one in the higher technical and one in the medium professional category. (Appendix A).

86. Most of the training courses taken by the unexpected successes group were equally distributed between Education/Health, Engineering/Technology/Science/Agriculture or the Miscellaneous Professional/Vocational groups (Table 47). The unexpected successes differed from the expected failures by taking subjects more often in the Education/Health field and less often in the Social Administration/Business categories.

87. The unexpected successes also had training courses which, compared with the expected failures, did not differ significantly in starting date (Table 48); lasted longer (Table 49); did not differ in terms of type of course (whether full-time, day release etc.) (Table 50); were perhaps more often taken at college (Table 51); and did not differ in how often they were seen to benefit their long term job prospects (Table 52).

88. Before turning to examining the school characteristics of the groups, the results so far can be broadly summarised as follows:

Unexpected failures. The subsequent poor achievement of this group, who did well throughout their school years, was partly apparent in their public examination entries and results at 16. They were entered for and obtained fewer 'O' levels and had generally poorer results compared to their equivalent group of expected successes. A large number of the unexpected failures left school or finished continuous full-time education at an early age. Many did not pursue any further activities which might have enabled them to gain qualifications. Of those who did, roughly equal proportions pursued educational courses or work related activities. In the event, about half gained their highest qualifications at school with the other half roughly equally divided between post-school educational courses and work related experiences. Of those with some post-school courses, the respondents in this group took fewer education courses and more had failed courses. Of those with work related experiences, there were no differences, compared with the expected successes, in the number of apprenticeships and/or training courses, nor in the number of failures on these.

Unexpected successes. The subsequent high achievement of this group, who had done poorly during their school years, was largely not apparent in their public examination entries and results at 16. Thus, although this group had better examination results than their equivalent expected failures, the differences were not striking and their achievements were poor at this stage. A large number of this group left school or continuous full-time education at an early age although the great majority pursued a further activity after school, this being mainly through work. The same is reflected in their highest qualification results in that, although some gain these through post-school education courses, the great majority obtained them through apprenticeships or training. Taking those who had had post-school education courses, the respondents in the unexpected successful group did not differ from the expected failures, in terms of number of courses, although fewer had failed courses. Taking those with some apprenticeship or training, the unexpected successes did not

differ from the expected failures, in the total number of such experiences, although more did apprenticeships and fewer did training courses. A large difference between the two groups, however, was in the very low proportions of the unexpected successes, and the high proportions of the expected failures, who had been unsuccessful on apprenticeships or training courses.

School Characteristics and Experiences at 16.

89. An additional part of this investigation was to examine some of the characteristics of the schools the respondents attended at the age of 16 and a number of aspects of their experiences at school. The aim was to see if the comparison groups attended schools, or had experiences, which differed between them. Given the results so far, i.e. that the unexpected failures started doing badly from the time of 16-year examinations and the unexpected successes doing well after school we might expect school experiences to be more important for the unexpected failures. On the other hand the schools the unexpected successes attended could have been important in facilitating the paths they took after they left school. In the event there is evidence for both possibilities in the results.

90. A large number of variables were examined and as a number of them, in line with other research on school characteristics and attainment, showed no or inconsistent associations between the groups, results are not usually given for each variable individually. Instead, Appendix C lists these variables and the results are described below for the two sets of comparisons separately. It will be clear that a number of the variables examined are themselves intercorrelated. Further analysis is needed to allow for these cross correlations to see if the variables still discriminate between the groups.

Unexpected failures.

91. Although the schools that the unexpected failures attended at 16 were not different in many ways to those of the expected successes, there were also some important differences.

92. There were some (generally small) differences between the unexpected failures and expected successes in the type, sex composition and pupil-teacher ratio of the schools they attended. Similar proportions in the two groups attended comprehensive schools but the unexpected failures slightly more often attended secondary modern rather than grammar schools. They also less often attended non-maintained (mostly independent and direct grant) schools (Table 53). More of the unexpected failure girls (but not boys) attended mixed-sex schools and more were in schools with high pupil-teacher ratios (Tables 54, 55). School size, teacher turnover, age stucture of school, number of pupils suspended or expelled were not different between the groups. However, in line with the type of school differences, the unexpected failures attended schools with a higher proportion of children from manual backgrounds and with a perhaps less 'academic orientation'. (As indices of the latter, four variables were examined, each separately for boys and girls, and they were all significantly different . These were: percentage studying for 'O' levels; number of students leaving the school with at least 2 'A' levels; number who went on to degree courses; and percentage staying on beyond MSLA - Appendix C. It is not possible to express the number of students with 'A' levels and the number going on to degree courses in percentages and they are used as rough measures in conjunction with the others. It is also as well to point out that the phrase 'academically orientated schools' is not necessarily a reflection on the school alone but also its intake). Parent-school contacts, school uniforms, disciplinary methods used, career arrangements, class size and whether English or Maths classes were streamed or mixed ability did not differentiate between the unexpected failures and expected successes. The unexpected failures who were streamed were more often in lower streams and although they did not differ in the number of hours per week of English teaching, they had fewer hours of Mathematics.

93. Taking teachers perceptions or ratings of the pupils, the unexpected failures were more often rated lower on English and Mathematics ability (Tables 57, 58). They were also less often seen as likely to benefit from either staying on at school beyond the minimum school

leaving age or from types of further education leading to higher qualifications (Table 59, 60). They were seen as having lower grade jobs in the future and their parents were more often deemed to be less interested in their education (Tables 61, 62).

94 However, it was interesting that, although rated lower in comparison with the expected successes, a number of children in the unexpected failures were rated quite high on a number of the above. Thus, in this group who failed to obtain any 'A' levels, one quarter were seen to be capable of an 'A' level in English and 15 percent in Mathematics; 63 percent were seen to be likely to benefit from staying on at school after 16 (when in fact only 33 percent did so); 39 percent were seen to be suited to a degree, Bachelor of Education, full-time advanced courses in Polytechnics/further education or teacher training courses (exact comparison is not possible here but 16 percent of this group had post-school educational experiences, leading to a qualification, which were full-time/sandwich courses); and indeed a third were expected to be in professional jobs (but job outcomes at 23 have not been examined in this report).

95 The unexpected failures slightly more often had high scores on the Rutter school behaviour scale as rated by their teachers (Table 63). High scores were defined as being 11 or more, which applied to 13 percent of the population. This would be, only, indicative of deviant or difficult behaviour but not necessarily diagnostic of a psychiatric condition (Rutter et al. 1975, Ghodsian et al 1980). The unexpected failures also had a lower school attendance record which could have been for a number of reasons including truancy or ill-health (Table 64).

Unexpected successes.

96. Comparing the unexpected successes with the expected failures, there were even fewer differences but, as above, some notable results were found.

97. The two groups did not differ on type of school, sex segregation, pupil-teacher ratio, size of school, teacher turnover, age structure of school, number of pupils suspended or expelled and the social mix of the school. There was some suggestion of the unexpected successes being in more 'academically orientated' schools (see pararagraph 92) as three out of the eight comparisons carried out on this aspect were significant - all three variables were measures of boys' achievements. Generally, parent teacher contacts, school uniform, disciplinary methods used and careers arrangements were not different between the two groups. The exceptions were: more of the unexpected successes were in schools which paid a teacher a special salary for careers work; and which more often had parent-teacher discussions and associations. These factors might indeed have helped the unexpected successfuls to obtain their vocational training. Class size showed the familiar and most probably artifactual reverse associations (i.e. the unexpected successfuls more often being in large classes). The unexpected successes were also more often in higher streams but did not differ in terms of number of hours per week spent on learning English or Mathematics.

98. The teachers' perceptions and ratings of the respondents' English and Mathematics abilities, recommendations for staying on at school, further education and jobs and their perception of parental interest were again, in the expected directions i.e. the unexpected successes being rated more favourably. (Tables 57 - 62). As for the previous group above, the discrepancy between these perceptions and later outcomes were examined. However the results were rather different from those of the unexpected failures where the teachers had, on the whole, over-estimated the respondents or the latter had not come up to the teacher's expectations. In the case of the unexpected successes, the teacher's assessment of English and Mathematics ability, age of leaving school, or type of further education were quite closely matched to actual outcomes. A large number in this group were also thought to be suited to jobs in the manual/industrial category which includes engineering/building and construction trades, which is in

accord with their subsequent apprenticeship and training experiences. On the other hand, it is noteworthy that over 90 percent of the unexpected successes (the group who subsequently had five or more 'O' levels or equivalent) were judged to be below 'O' level standard in each of English and Mathematics. Thus, it is against this background of educational performance and experience up to 16, that the unexpected successes go on to obtain their qualifications after school.

99. The unexpected successes, compared to the expected failures, less often had high scores on the Rutter school behaviour scale (indicating less 'deviant' behaviour amongst this group (see paragraph 95). They also more often had a high school attendance record (Table 64).

100 To summarise, a number of school variables examined were not significant, but nevertheless there were some differences between the groups. The unexpected failures more often attended, what were essentially, less 'academic' schools. They were no more likely to be in streamed or setted classes than the expected successes but, where they were streamed, they tended to be put in lower streams. They were also rated lower by their teachers in terms of their abilities, further education, jobs and degree of parental interest, when compared with the expected successes. But, nevertheless, a significant proportion of this group were expected to do better on these measures than they actually achieved by age 23. This group also slightly more often had deviant school behaviour scores and a poorer school attendance.

101 The unexpected successes seemed to have been in schools which were perhaps more academically orientated, and put a greater emphasis on careers guidance and parent-teacher discussions. They tended to be more often in streamed or setted classes and were more often in the higher streams. Teachers' ratings of this group, though low, were higher or more favourable, compared to the expected failures and quite close to actual outcomes around 16. However, despite these ratings and their performance at 16, this group went on to obtain their high qualifications. The unexpected successes also less often had deviant behaviour scores and had a higher school attendance record.

SUMMARY OF RESULTS.

102 This report has necessarily been a somewhat limited examination of the experiences of the groups of interest. What leads to subsequent failure or succes must be the result of a long and complex process of interactions between factors which would include personal, family, health, economic school and other circumstances. Some of these have been examined here and a partial picture of the groups has been drawn.

103 Using test scores at the ages of 7, 11 and 16 two groups of children, one near the top and the other near the bottom of tested attainment, were defined. The top, or high performance group, were the top 15 percent and the bottom, or the low performance group, were the bottom 19 percent of the age group. Within these two groups there were respondents whose highest qualifications, by age 23, were unusually low, in the case of the high performance group, and unusually high, in the case of the low performance group. These two 'unexpected' groups constitute the groups of interest. They are labelled: the 'unexpected failures' - those with high school performance but low qualifications by age 23 (to be compared with their equivalent group of 'expected successes' - high school performance and high qualifications by age 23); and 'unexpected successes' - low school performance but high qualifications by age 23 (to be compared with their equivalent group of 'expected failures' - low school performance and low qualifications by age 23).

104 Both the 'unexpected' groups and the original groups, from which they were drawn, were selected using quite stringent criteria, and were therefore likely to be small in size. Despite this, each of the two 'unexpected' groups constituted about one-fifth of the original high and low performance groups.

105 After examining some basic characteristics of the groups they were compared in terms of their: public examinations record by 16; school leaving age and overall patterns of post-school experiences in education and work related education; post school education experiences and their highest educational

qualification course; work related education experiences and the apprenticeship or training course leading to the highest qualification amongst these; and, finally, the characteristics of the schools they attended at 16 and some of their experiences while there. The results can be summarised as follows:

Unexpected failures. The respondents in this group:

Qualifications by age 23. a) were defined on the basis that, despite their consistently high tested attainment, none achieved at least one 'A' level or an equivalent qualification by age 23.

Basic Characteristics. b) had slightly lower mean test scores at the ages of 11 and 16, but not at age 7, compared to their equivalent group of 'expected successes'. They were also more likely to be boys, come from a higher social class and were slightly more likely to live in the North and the Midlands and less likely to live in Scotland.

Public examinations by age 16 c) were entered for and obtained fewer 'O' levels and had generally poorer results, by age 16, compared with their equivalent group of expected successes.

Leaving school and after d) left school or continuous education at an early age and many did not pursue any further activities which might have enabled them to gain qualifications. Fewer did education courses,

slightly more did work related activities and, of those who pursued anything, equal proportions did educational courses or work related activities. In the event, about half gained their highest qualifications at school, with the other half equally divided between post-school educational courses and work related experiences.

Post-school education courses.

e) less often took education courses and those who did took fewer courses and more often failed courses.

f) took highest educational qualification courses which were more likely to be in Business/Social Administration. These courses were also more likely to have started earlier and been shorter; be less often a full-time/sandwich course; have been undertaken without a grant and with income from working (perhaps indicating a poorer family); have taken place in further education/technical colleges/private and other institutions, as opposed to universities or polytechnics; and be seen by them as not having improved their long term job prospects.

Post-school work related education.

g) did not differ greatly in their work related experiences from the expected successes. However more of the unexpected failures obtained their highest work related qualifications from apprenticeships rather than training. There were some detailed differences between the apprenticeships and training courses of the

unexpected failures and expected successes given in the text. Subjectively, they were seen as a less positive experience by the unexpected failures.

School characteristics and experiences at 16.

h) more often attended what were essentially less 'academic' schools with a lower percentage of children from non-manual backgrounds. They were no more in streamed or setted classes than the expected successes but, where they were streamed, they tended to be put in lower streams. However, despite being rated by teachers as lower on their abilities, suitability for further education, type of jobs and degree of parental interest, a significant proportion of this group were expected by the teachers to do better than they actually achieved by 23. This group also slightly more often had school behaviour scores (as judged by teachers) which could indicate more stress, and they had a poorer school attendance.

Unexpected successes

The respondents in this group:

Qualifications by age 23.

i) were defined on the basis that, despite their low school performance, they managed to achieve at least five 'O' levels or equivalent by age 23.

Basic characteristics.

j) had slightly higher mean test-scores at 11 and 16, compared with their equivalent group of 'expected failures'. They were also much more likely to be male. Indeed 78 percent of this group were men, compared with 44 percent of the expected failures. They were more often from the professional and intermediate non-manual social classes and less often from semi- or unskilled manual clases. There was also a suggestion that more of the unexpected succeses lived in the South of England.

Public examinations by 16.

k) did not show their subsequent high qualifications in their public examination results at 16. Thus, although more, compared with the expected failures, were entered for examinations and more gained qualifications, the differences were not striking and their results were quite poor.

Leaving school and after.

l) left school and continuous education at an early age although the great majority of them attempted further qualifications, these being mainly through work. A large number undertook apprenticeships. This is reflected in their highest qualifications results in that, although some gained these through post-school education courses, the great majority obtained them through apprenticeships or training.

Post-school education courses.

m) did not differ, compared to the expected failures, in the percentage taking post-school education courses, or in the number of these, although fewer had failed courses.

n) had highest educational qualification courses from which, of those taking them, over half obtained qualifications of 'A' level standard and above. There were some detailed differences in these courses between the unexpected successes and expected failures described in the text. However, it is worth noting that more of the unexpected successes did longer courses, had grants for their full-time courses and thought the course had improved their long term job prospects.

Post-school work related education.

o) as mentioned above, far more often had job related experiences and in many cases obtained their qualifications from apprenticeships. Taking those with some work related experiences, the unexpected successes did not differ, from the expected failures, in the number of such activities although a very big difference was in the larger number of the expected failures who had failed apprenticeships or training courses. Most of the qualifications obtained by the unexpected sucesses were in nursing, higher technical, technical and craft categories. There were very few differences between the apprenticeships and training courses of the unexpected successes and expected failures except, of course, in level of qualifications.

School characteristics and experiences at 16.

p) seemed to have been in more academically oriented schools which perhaps put more emphasis on careers guidance and parent-school contacts. They tended to be more often streamed or setted and were more often in the higher streams. They had a higher attendance record and were less often rated as having behaviour which could indicate stress. Teachers' ratings of this group, though low, were higher or more favourable, compared to the expected failures, and quite close to actual outcomes around 16. However, despite these low ratings and their low performance at 16, and indeed at 7 and 11, this group went on to obtain their high qualifications.

Future work.

106 A proposal is already with the DES to continue the analysis presented here. This would enable a fuller picture to be drawn. Briefly, it would extend the analysis to social, family, educational, personal and health factors at 16 and earlier ages. It would also examine changes in these over time and the inter-relationships between the factors. Moreover, the respondents' experiences after 16 in terms of their labour market experiences, family circumstances and family formation would be explored.

107 Additionally, it would be useful to examine the details of failed courses, especially those undertaken by the respondents who failed unexpectedly but also for those taken by the 'expected failures'.

This paper has mainly concentrated on comparing what was achieved by the groups. It would be important to compare contrasting outcomes i.e. the successful experiences of the expected successes with the failure experiences of the unexpected failures; the successful experiences of the unexpected successes with the failure experiences of the expected failures.

108 Additionally, the successful experiences of the expectedly succesful and unexpectedly successful groups and the failure experiences of the unexpected failures and expected failures could also be compared.

109 There is also a need for a more detailed examination of the qualifications of the unexpected successes.

110 Finally, the sex differences, which were particularly strong in the low attainment groups, need to be explored.

APPENDIX A.

Hierarchical order of the highest qualification level held based on the GHS Classification.	LEVEL.
Higher degree (Census Level A)	1
First degree/university diploma or certificate/qualifications obtained from colleges of further education or from professional institutions etc. of degree standard (Census Level B).....	2
Non-graduate teaching qualifications (Census Level C)	3
HNC/HND/BEC/TEC HIGHER/City & Guilds Full Technological Certificate/ university diploma or certificate/Qualifications obtained from colleges of further education or from professional institutions etc. below degree but above GCE 'A' Level standard (Census Level C).	4
Nursing qualifications (Census Level C standard)	5
2 or more subjects at GCE 'A' Level, SLC/SCE/SUPE at Higher grade or Certificate of Sixth Year Studies.	6
1 or 'No Answer' to number of subjects at GCE 'A' level, SLC/SCE/ SUPE at Higher grade or Certificate of Sixth Year Studies; City & Guilds Advanced or Final; ONC/OND; BEC/TEC National/General/ Ordinary.	7
5 or more subjects at GCE 'O' level obtained before 1975, or in grades A-C if obtained later; 5 or more subjects at SCE Ordinary obtained before 1973, or in bands A-C if obtained later; 5 or more subjects at CSE grade 1, or at School Certificate/SLC lower //SUPE Lower; City & Guilds Craft or Ordinary; JIB/NJC or other Craft/Technician Certificate.	8
1-4 subjects at GCE 'O' level etc. with clerical or commercial qualifications.	9
As for Level 9 but without clerical or commercial qualifications..	10
Clerical and commercial qualifications including RSAs without GCE 'O' level ..	11
CSE 2-5	12
Apprenticeship. Not elsewhere included.	13
Other qualifications.	14
No qualifications/CSE ungraded/DK grade	15
No answer/refusal/don't know.....	16

Contd/.....

Notes.

1) The above heirarchy was used to define the groups of interest falling above or below the criteria of 1 'A' level or 5 'O' levels or their equivalents. When describing the education or work-related qulifications of the groups the following groupings were used:

Above 'A' level was taken to be categories 1-5.

'A' level and equivalent was taken to be categories 6,7.

'O' level and equivalent was taken to be categories 8, 9, 10, 11.

Below 'O' level was taken to be categories 12, 13, 14.

Different nursing qualifications were in the same category in the NCDS and are therefore difficult to order. In this report they were treated as being above 'A' level. This does not affect the definitions of the main groups and only has the effect of increasing the above 'A' level qualifications held on courses.

It is debatable whether RSA qualifications (category 11) should have been grouped with 'O' levels as above. In any case these are always mentioned separately when describing the qualifications obtained so that thay can be distinguished. Furthermore, as the number of RSA qualifications held were not known in the NCDS, respondents with these qualifications were only placed in the higher categories of 8 and 9 on the basis of the 'O' levels (if any) that they had.

2) When comparing qualifications obtained from apprenticeships, training and education courses, in cases of similar qualifications, priority is given in the same order (education having highest and apprenticeships having lowest priority).

APPENDIX B.

List of subjects in each main category.

EDUCATION

001 Education/Teacher Training

002 Teaching methods
003 Programmed learning
004 Audio-visual aids
005 Other education/teaching
006 Education combinations
007 Education combined with other groups

MEDICINE, DENTISTRY AND ANCILLARY HEALTH SUBJECTS

010 Pharmacy

011 Pharmacology

012 Medicine

013 Dentistry

(Ancillary Health Subjects)

014 Air Pollution
015 Cardiography
016 Chiropody
017 Cleaning Science
018 Dental Nurses and Assistants
019 Dental Technicians
020 Dietetics
021 Dispensing assistants
022 Dispensing opticians
023 Dispensing technicians
024 Food inspection, analysis and hygiene
025 Health visitors
026 Manicure and pedicure
027 Meat inspection
028 Medical certificate
029 Medical laboratory technicians
030 Nursing (medical)
031 Nursery nursing
032 Nutrition
033 Ophthalmic opticians
034 Physiological Measurements Tech.
035 Physiotherapy
036 Pre-nursing
037 Public health inspection
038 Sanitary inspection
039 Radiography
040 Smoke Control
041 Speech therapy
042 Surgical laboratory technicians
043 Other health subjects
044 Health and safety
045 Health combinations
046 Health combined with other groups
047 Occupational therapy

ENGINEERING

050 Aeronautical engineering

051 Aeronautics
052 Aerodynamics
053 Aerostructure
054 Aero engineering and space technology
055 Aircraft electrical power systems
056 Aircraft electronic devices
057 Astronautics
058 Flight Control
059 Guided Missiles

060 Agricultural engineering

061 Farm machinery maintenance
062 Horticultural machinery maintenance

064 Automobile engineering

065 Motor bodywork
066 Motor vehicle electricians
067 Motor vehicle engineering
068 Motor vehicle mechanics
069 Motor vehicle technicians
070 Motor vehicle painting
071 Motor vehicle repair and maintenance
072 Panel beating
073 Vehicle body building

074 Chemical engineering and technology

075 Chemical plant operation
076 Chemical technicians
077 Chemical technology
078 Gas engineering
079 Process plant operation

080 Civil engineering

081 Civil engineering (gas)
082 Municipal engineering
083 Traffic engineering
084 Land economics

085 Electrical engineering

086 Cable jointing
087 Electrical fitting
088 Electrical installation
089 Electronics
090 Electronic engineering
091 Electronic servicing
092 Illuminating engineering
093 Radar
094 Radio and television
095 Radio, television and tape recorders (amateur)
096 Radio, television and tape recorders servicing
097 Telecommunications

098 Marine engineering

099 Mechanical engineering

100 Fabrication of steelwork
101 Hydraulics
102 Mechanical engineering craft practice
103 Mechanical engineering technicians
104 Mechanical engineering inspection
105 Rail carriage building
106 Refrigeration engineering
107 Workshop technology and practice

108 Naval architecture and ship-building

109 Shipbuilding
110 Ship joinery
111 Ship plumbing
112 Yacht and boat building

113 Production engineering

114 Precision engineering
115 Ergonomics
116 Materials handling

147 General and other engineering

117 Audio-visual technicians
118 General engineering
119 Combined engineering
120 Control engineering
121 Blacksmithing
122 Boiler house practice
123 Boilermaking
124 Corrosion engineering
125 Engineering drawing
126 Engineering planning, estimating and costing
127 Engineering science
128 Fire engineering
129 Heating and ventilating engineering
130 Industrial engineering
131 Industrial radiography
132 Mill engineering and services
133 Instrument engineering and maintenance
134 Metal finishing and electro-chemistry
135 Metal plate work
136 Metrology
137 Miscellaneous engineering and metal trades
138 Nuclear engineering
139 Pipework engineering
140 Press tool making
141 Pressure vessel design
142 Scientific instrument manufacture (including optical instruments)
143 Sheet metal work
144 Textile engineering
145 Watch and clock manufacture
146 Welding

148 Engineering combinations
149 Engineering & technology combinations
150 Engineering in combination with other groups (except technology)

TECHNOLOGY

160 Building

161 Bricklaying
162 Building economics
163 Building foremanship
164 Building inspection
165 Building technology
166 Builders quantities
167 Carpentry and joinery
168 Clerks of works
169 Concrete practice
170 Concrete technology
171 Construction plant, maintenance and repair of
172 Furnace brickwork
173 Gas fitters work
174 Glazing and allied trades
175 Heating and ventilation (installation and fitting)
176 Highways and works superintendents
177 Industrial safety officers
178 Masonry
179 Mastic asphalt work
180 Painting and decorating
181 Plasterers work
182 Plumbing and sanitary engineering
183 Roadwork (road masons and paviors)
184 Roof slating and tiling
185 Shopfitting
186 Structural engineering
187 Wall and floor tiling (including terrazzo and mosaic work)

188 Clothing and footwear

189 Boot and shoe manufacture and repair
190 Dress manufacture
191 Embroidery and lace manufacture
192 Hosiery and knitted goods manufacture
193 Millinery (other than domestic)
194 Tailoring (other than domestic)

196 Food technology and manufacture

197 Bakery and flour confectionery
198 Brewing
199 Chocolate and sugar confectionery
200 Flour milling
201 Milk pasteurisation, processing and distribution

202 Fuel and petroleum technology

203 Coal processing
204 Gas manufacture and utilisation
205 Petroleum and petroleum products

206 Metal technology

207 Metallurgy
208 Foundry technology
209 Foundry practice
210 Iron and steel manufacture
211 Metallurgical technicians
212 Non-ferrous metal manufacture
213 Patternmaking

214 Mining and quarrying

215 Colliery electricians
216 Colliery mechanics
217 Mineral engineering
218 Mining engineering
219 Mining deputies and managers

220 Mining geology

221 Offshore engineering and technology

222 Printing and book production

223 Printing
224 Book production
225 Book binding
226 Electro and stereotyping
227 Line composition
228 Lithographic printing
229 Monotype casters work
230 Monotype composition
231 Photo engraving
232 Photogravure
233 Photo-lithography
234 Printing administration
235 Printing ink technicians
236 Printing technicians
237 Printing warehouse practice
238 Publishers edition binding
239 Technical authorship and illustration
240 Typographical design
241 Typography

242 Surveying /Valuation

243 Mine surveying
244 Quantity surveying
245 Cartography

246 Textile technology and manufacture

247 Carpet and upholstery fabric manufacture
248 Cotton manufacture
249 Silk manufacture
250 Synthetic textile manufacture
251 Textile merchanting (where course has technological content)
252 Textile printing
253 Textiles, general
254 Woollen and worsted manufacture and weaving
255 Other textile manufacture

256 General and other technology and manufacture (see also 282 and 283)

257 Acoustics
258 Brickmaking
259 Ceramics technology and manufacture
260 Cybernetics (industrial)
261 Furniture and upholstery manufacture
262 Leather technology
263 Leather and leather goods manufacture, dyeing and finishing
264 Kiln burning
265 Gemmology
266 Goldsmiths and silversmiths work (excluding design)
267 Instrument technology
268 Jewellery manufacture
269 Musical instrument manufacture
270 Paint technology
271 Pottery manufacture
272 Paper science
273 Paper technology
274 Plastics technology
275 Polishing and Sanding
276 Rubber workshop practice
277 Rubber technology
278 Synthetic fibre manufacture
279 Timber technology
280 Tobacco processing
281 Woodcutting machinists work
282 Other manufacturing
283 Other technology

284 Technology combinations
285 Combinations of engineering and/or technology with other groups

AGRICULTURE, FORESTRY AND AND VETERINARY SCIENCE

300 Agricultural chemistry

301 Agriculture (see also 314-329)

302 Agricultural economics
303 Animal husbandry
304 Beekeeping
305 Dairying
306 Farm records and accounts
307 Farm organisation and management
308 Gardening
309 Greenkeeping
310 Horticulture
311 Poultry
312 Rural saddlery
313 Fish farming

314 Agricultural biology

315 Agricultural biochemistry
316 Agricultural botany
317 Agricultural science
318 Agricultural zoology
319 Animal genetics
320 Plant taxonomy
321 Soil chemistry
322 Soil science

323 Forestry

324 Arboriculture
325 Sylviculture
326 Forestry management
327 Timber felling and sawmilling
328 Timber merchanting
329 Tree nursery work

330 Veterinary science

331 Animal nursing
332 Animal technicians

333 Agricultural combinations
334 Agricultural and other group combinations

SCIENCE

350 Biological Sciences

351 Applied biology
352 Applied micro biology
353 Biology
354 Bacteriology
355 Biological chemistry
356 Botany
357 Genetics
358 Microbiology
359 Microscopy
360 Physiology and anatomy
361 Pathology
362 Zoology

363 Biochemistry

364 Applied Biochemistry
365 Medical biochemistry
366 Physiological chemistry

367 Chemistry

368 Analytical chemistry
369 Applied chemistry
370 Cosmetic chemistry

371 Spectroscopy
372 Chemistry as applied to textile industry
373 Dyeing of textiles
374 Polymer chemistry
375 Colour chemistry
376 Technical chemistry

377 Geology

378 Geophysics
379 Mineralogy

380 Mathematics

381 Applied mathematics
382 Arithmetic
383 Computer studies (mathematical bias)
384 Decimalisation
385 Numerical analysis
386 Elasticity
387 Hydrodynamics
388 Probability theory
389 Statistics
390 Theoretical astronomy
391 Technological mathematics
392 Systems international units
393 Computer science

394 Physics

395 Applied physics
396 Applied astronomy
397 Mathematical physics
398 Nuclear physics
399 Astrophysics
400 Radio astronomy
401 Radiation protection

402 Environmental sciences

403 Oceanography
404 Meteorology

405 General and other sciences

406 Science laboratory technicians

407 Mathematics/physics
408 Mathematics/other sciences
409 Combinations of physical sciences other than maths/physics
350 Combinations of biological sciences
410 Combinations of sciences
411 Combinations of sciences with other subjects

SOCIAL, ADMINISTRATIVE AND BUSINESS SUBJECTS

420 Economics

421 Economic sciences and statistics
422 Economic history
423 Economic organisation
424 Industrial economics

425 Geography

426 Law

427 Legal executives

428 Social Sciences

429 Sociology
430 Humanities and social studies
431 Industrial relations
432 Social administration

433 Social work

434 Careers guidance
435 Youth and community service/ Youth work
436 Youth employment and vocational guidance

437 Psychology

438 Social anthropology

439 Other economics, law or social sciences
440 Combinations of economics law and social sciences

441 Accountancy, banking and insurance

442 Accountancy
443 Book-keeping
444 Law accounting
445 Cost and works accounting
446 Actuarial studies
447 Banking and currency
448 Insurance
449 Municipal treasurers and accountants
450 Stock exchange practice
451 Taxation

452 Government and public administration

453 Civil defence
454 Central government
455 Fire service
456 Hospital/health administration
457 International relations
458 Local government
459 Police
460 Political science

461 Management and management science

462 Administration, general
463 Business administration
464 Company secretarial practice
465 Computer systems analysis
466 Cybernetics (management)
467 Industrial administration
468 Industrial foremanship
469 Industrial organisation
470 Industrial training
471 Information science
472 Organisation and methods

473 Management, construction
474 Management, estate
475 Management, housing
476 Management, office
477 Management, personnel
478 Management, production
479 Management, works
480 Management, sales
481 Marketing and sales management
482 Operational research

483 Quality control
484 Time and motion study
485 Work study
486 Other administrative and management studies
488 Supervisory studies

489 Secretarial/clerical studies

490 Agricultural secretaries
491 Clerical
492 Personal Assistant
493 Shorthand/Typing
494 Typing
495 Medical secretaries

514 Other social administrative and business subjects

496 Advertising
497 Business studies
498 Commerce (including combined commerce and secretarial)
499 Business machine operation
500 Commercial travelling
517 Computing
501 Computer languages
502 Computer operation
503 Computer programming (general and commercial bias)
504 Data processing
465 Systems analyst
505 Estate agency
506 Export practice
507 Office studies
508 Purchasing
509 Salesmanship
510 Sales representatives
511 Shipbroking
512 Switchboard operation
513 Travel/travel agency

515 Combination of social, admin, business
516 Combinations with other groups

MISCELLANEOUS PROFESSIONAL AND VOCATIONAL SUBJECTS

519 Architecture

520 Landscape architecture
521 Land use
522 Town and country planning
523 Conservation (of buildings)
524 Rural and regional resources planning

525 Catering and institutional management

526 Catering, basic trades
527 Cookery for hotel and catering trades
528 Hotel and catering
529 Hotel book-keeping and reception
530 Institutional management and housekeeping
531 Licensed house staff
532 Preliminary trade cookery
533 Waiters and hotel assistants
534 Institutional catering and housekeeping

535 Home economics

536 Domestic science/ dress and design
537 Domestic science/ food and nutrition
538 Domestic studies
539 Cookery
540 Dressmaking (domestic)
541 Home management
542 Housewerking
543 Millinery (domestic)
544 Needlework and embroidery (domestic)
545 Tailoring (domestic)
546 Upholstery and soft furnishings
547 Weaving

548 Nautical studies

549 Fishing
550 Nautical catering
551 Nautical science
552 Radio-telegraphy (nautical)
553 Seamanship and navigation

554 Transport

555 Air transport
556 Rail transport
557 Road transport
558 Shipping

559 Wholesale and retail trades

560 Retailing
561 Flower display and arrangement/Florist
562 General and undefined distribution
563 Grocery
564 Paper merchanting
565 Retail distribution
566 Retail management and storekeeping
567 Stationery
568 Textile distribution

569 Other professional and vocational subjects

570 Hairdressing /cosmetics/ beauty
571 Laundry and dry cleaning work
572 Journalism
573 Librarianship
574 Trichology

575 Photography

576 General and Liberal studies

578 Civics
579 Current affairs
580 Modern studies
581 Misc. professional and vocational n.e.c.
582 Combinations of professional and vocational
583 Combinations with other groups

LANGUAGES

600 English language and literature
601 English for foreign students

602 Gaelic and other Celtic languages

603 French

604 German

605 French/German

606 Spanish

607 Danish
608 Dutch
609 Italian
610 Norwegian
611 Portuguese
612 Swedish
613 Other single Western European languages

614 Russian

615 Other Central and Eastern European languages

616 Classical studies

617 Oriental, Asian and African languages

618 Other languages

619 Modern languages

620 Combined language courses (see also 605)
621 Languages with other groups

ARTS OTHER THAN LANGUAGES

650 Archaeology

651 History

652 Philosophy
653 Moral sciences
654 Logic

655 Theology

656 Arts general (where not elsewhere specified)
657 Combinations of arts with other groups

MUSIC, DRAMA AND VISUAL ARTS

669 Art and design

670 Art
671 Design
672 Art metalwork and jewellery design
673 Antiques
674 Ceramics (design)
675 Fashion design
676 Furniture design
677 Graphic design (including commercial art and illustration)
678 Handicrafts
679 History of art
680 Industrial design
681 Industrial glass design
682 Interior design
683 Lettering
684 Painting
685 Sculpture
686 Stained glass
687 Textile design
688 Window dressing and display
689 Woodcarving

699 Drama and entertainment and music

700 Drama
701 Speech
702 Cinema and film studio work

703 Music

704 Music, drama, visual arts, n.e.c.
705 Music, drama, visual arts combinations

706 Subject given, but can't be classified anywhere else

(707 No subject given, or illegible)

708 More than one CSE and/or 'O' level being studied for

APPENDIX C.

Variables examined under school characteristics and experiences at 16

Type of school

Sex segregation

Pupil-teacher ratio

Size of school

Teacher turnover

Age of youngest pupils

Age of oldest pupils

Number of pupils suspended/ expelled.

Percentage of fathers in non-manual occupations.

Academic climate

Percentage Boys aged 15 studying for GCE 'O' levels (or SCE 'O' grades).

Percentage Girls aged 15 studying for GCE 'O' levels (or SCE 'O' grades)

Number of boys who left last year with at least 2 'A' levels or 3 'H' grades

Number of girls who left last year with at least 2 'A' levels or 3 'H' grades.

Number of boys who left to take up degree level courses.

Number of girls who left to take up degree level courses.

Percentage of boys who stayed on at school after MSLA last year.

Percentage of girls who stayed on at school after MSLA last year.

Parent-school contacts.

Parent-teacher discussions.

Parent seeing pupils at work.

Demonstration of teaching methods.

Parent-teacher associations.

Disciplinary methods

Suspension

Corporal punishment.

Physical exercise

Extra work.

Contd/-

Disciplinary methods (contd).

Extra hours at school

Loss of status

Exclusions from popular activities or from the use of special equipment or rooms

Report to parents

Special behaviour/work reports

Careers arrangements

Number of teachers involved in careers guidance

Amount teaching load is reduced by for careers duties

Whether teacher paid special salary for careers work

Amount of careers training

Class size

English
Mathematics

Ability groupings (streamed/setted), mixed ability

English
Mathematics

Ability range of class - within school

English
Mathematics

Ability range of class - nationwide

English
Mathematics

Number of hours per week studying

English
Mathematics

Teachers ratings and perceptions of:

English ability
Mathematics ability
Whether child would benefit from staying on after MSLA

Type of further education suited to child

Type of child's first job

Paternal interest with regard to child's education

Maternal interest with regard to child's education

Child's behaviour at school using the Rutter school behaviour scale

School attendance.

Actual school attendance rate in the autumn term 1973.

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Notes to Tables

1) All tables contain percentages which are given to the nearest whole number with the columns adding up to 100 $\pm$ 1 percent.

2) When cell sizes are less than 5, these are shown in brackets and usually not percentaged. In some special cases, however, both the numbers in the cells and percentages are given.

3) To test the differences in proportions in 2 x 2 tables, the Chi-square test, corrected for continuity, has been used. In tables other than 2 x 2, the tests are overall tests unless stated otherwise. In some cases statistical tests were not appropriate either due to the nature of the results (e.g. showing qualifications in groups which themselves were selected on the basis of qualifications) or when cell sizes were small and could not be meaningfully combined. Two tailed t-tests were used for the difference in means.

4) * denotes a statistically significant result at 5 percent or better. N.S. means a non-significant result.

5) Tables 7 to 12 include respondents in England and Wales only (see paragraph 34).

Table 1: Highest qualification achieved in each group.

Highest Qualification obtained by 23	High performance at 7, 11 and 16		Low performance at 7, 11 and 16		
	Expected successes Group 1	Unexpected failures Group 2	Unexpected successes Group 3	Expected failures Group 4	Total Cohort
Above 'A' level	68	0	13	-	19
2 'A' levels or equivalent	18	0	(1)	0	5
1 'A' level or equivalent	14	0	39	0	11
5 'O' levels or equivalent	0	59	48	0	14
1-4 'O' levels or equivalent	0	34	0	16	19
Below 'O' level	0	4	0	36	16
None	0	3	0	48	16
N = 100%	926	248	241	1186	12538

Table 2: Mean test scores at the ages of 7, 11 and 16

Mean test scores	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.	Total Cohort
7-year Arithmetic	8.1	8.0	N.S.	2.9	2.7	N.S.	5.2±2.5
7-year Reading	29.5	29.5	N.S.	15.8	15.4	N.S.	23.7±7.0
11-year Maths	31.6	29.1	*	7.3	5.5	*	17.2±10.3
11-year Reading	24.3	22.7	*	10.2	9.2	*	16.3±6.2
16-year Maths	32.7	31.8	*	20.0	16.7	*	25.7±6.8
16-year reading	23.3	19.9	*	7.5	6.1	*	13.1±7.0
(N=100%)	926	248		241	1186		

Figures in the Total column are overall means and standard deviations.
Numbers in Total column range from 9469 to 11130.

Table 3: Sex.

Sex	High performance at 7, 11 and 16. Expected successes Group 1.	Unexpected failures Group 2	Sig	Low performance at 7, 11, and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
Male	55	46		78	44	
Female	45	54	*	22	56	*
(N=100%)	926	248		241	1186	

Table 4: Social class at 16

Social Class	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
1, 2 Non-Manual	53	35		16	9	
3-Non Manual	12	12		7	6	
3-Manual	26	42		53	54	
4, 5 Manual	7	10	*	23	31	*
(N=100%)	727	197		180	850	

Table 5: Region of residence at 16.

Region	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
North	26	30		27	31	
Midlands	14	19		20	21	
South	43	42		39	31	
Wales	5	7		4	6	
Scotland	12	2	*	10	11	N.S
(N=100%)	919	245		241	1177	

Table 6: Total number of examinations entered by age 16.

Number of exams.	High performance at 7, 11 and 16. Expected successes Group 1.	Unexpected failures Group 2.	Sig	Low performance at 7, 11 and 16. Unexpected successes Group 3.	Expected failures Group 4.	Sig.
0	3	4		18	42	
1 - 2	1	(2)		15	19	
3 - 5	2	7		26	23	
6 - 8	16	63		37	15	
9+	78	25	*	4	1	*
(N=100%)	877	231		208	1048	

Table 7: Number of 'O' levels taken by age 16.

Number of exams.	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
0	4	9		91	97	
1-2	2	9		7	2	
3-5	7	25		2	1	
6-8	50	46		-	(3)	
9+	38	11	*	-	-	*
(N=100%)	771	226		183	993	

Group 3 Vs 4: test is on contrast between no and 1 or more exams

Table 8: Number of CSEs taken by age 16.

Number of exams	High performance at 7, 11 and 16 Expected successes Group 1	Unexpected failures Group 2	Sig	Low performance at 7, 11 and 16 Unexpected successes Group 3	Expected failures Group 4	Sig.
0	75	39		16	39	
1 - 2	15	24		14	20	
3 - 5	7	25		29	24	
6+	3	12	*	40	16	*
(N=100%)	771	226		183	933	

Table 9: Number of 'O' levels grades A-C or CSEs grade 1 passed by age 16.

Number of Exams	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
0	4	10		79	93	
1-2	3	25		20	6	
3-5	20	44		(2)	1	
6-8	50	20		-	-	
9+	24	2	*	-	-	*
(N=100%)	771	226		183	933	

Group 3 Vs 4: 0/1-9+

Table 10: Number of 'O' levels grade A passed by age 16.

Number	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
0	40	77		100	100	
1	19	16		-	-	
2-3	21	7		-	-	
4+	20	(1)	*	-	-	
(N=100%)	771	226		183	933	

Table 11: 'O' level and CSE results in English by age 16.

	High performance at 7, 11 and 16.			Low performance at 7, 11 and 16.		
	Expected successes Group 1	Unexpected failures Group 2	Sig.	Unexpected successes Group 3	Expected failures Group 4	Sig.
'O' level grades A/B	68	41		-	(3)	
'O' level grade C/CSE grade 1	19	34		3	1	
'O' levels D/E CSE 2-5	6	16		58	36	
Other	(3)	2		9	5	
No entry for subject	6	3	*	30	58	*
(N= 100%)	771	226		183	933	

Group 3 Vs 4: any 'O' level/no entry
Tests omit 'other' category.

Table 12: 'O' level and CSE results in Mathematics by age 16.

	High performance at 7, 11 and 16.			Low performance at 7, 11 and 16.		
	Expected successes Group 1	Unexpected failures Group 2	Sig.	Unexpected successes Group 3	Expected failures Group 4	Sig.
'O' level grades A/B	58	20		-	-	
'O' level grade C/CSE grade 1	22	30		0	(1)	
'O' levels D/E CSE 2-5	12	33		40	12	
Other	1	8		10	11	
No entry for subject	7	10	*	49	76	*

Group 3 Vs 4: 'O' level/no entry
Tests omit 'other' category.

Table 13: School leaving age.

Age in years	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
16 or earlier	15	67		88	95	
17	11	21		8	4	
18+	74	12	*	4	1	*
(N=100%)	926	248		241	1183	

Table 14: Age of completing continuous fulltime education.

Age in years	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
16	10	55		82	93	
17	8	23		8	5	
18+	82	21	*	10	2	*
(N=100%)	923	248		241	1183	

Table 15: Education and job related educational experiences after school

	High performance at 7, 11 and 16.			Low performance at 7, 11 and 16.		
	Expected successes Group 1	Unexpected failures Group 2	Sig.	Unexpected successes Group 3	Expected failures Group 4	Sig.
No educ/ training/ apprent.	2	26		4	65	
Just ed.	57	26		10	6	
Just app.	2	9		50	13	
Just train.	10	22		15	13	
App & Train	1	2		10	1	
Educ & at least 1 of app/train	28	15	*	12	2	*
(N=100%)	926	248		241	1186	

Table 16: Sources of highest qualifications

	High performance at 7, 11 and 16.			Low performance at 7, 11 and 16.		
	Expected successes Group 1	Unexpected failures Group 2	Sig.	Unexpected successes Group 3	Expected failures Group 4	Sig.
School	13	54		6	81	
Post school educ. courses	70	25		17	9	
Apprenticeship	4	9		58	3	
Training	13	12	*	20	7	*
(N=100%)	926	241		241	618	

Table 17. Full and part-time post school education courses

Number of Courses	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
1	59	78		75	87	
2+	41	22	*	25	13	N.S.
(N=100%)	782	102		52	97	

Base: Those with education courses.

Table 18: Full-time post school education courses

Number of Courses	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
1	68	86		90	92	
2+	32	14	*	(3)	(4)	N.S.
(N=100%)	702	57		30	53	

Base: Those with education courses.

Table 19. Part-time, post school education courses

Number of Courses	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
1	80	90		82	89	
2+	20	10	N.S.	(4)	11	N.S.
(N=100%)	15			22	45	

Base: Those with education courses.

Table 20: Failed, post-school education courses

Number of failed Courses	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
0	82	54		80	56	
1+	18	46	*	20	44	*
(N=100%)	753	93		49	89	

Base: Those with education courses.

Table 21: Highest qualification obtained on post-school education courses

	High performance at 7, 11 and 16.		Low performance at 7, 11 and 16.		
	Expected successes Group 1	Unexpected failures Group 2	Unexpected successes Group 3	Expected failures Group 4	TOTAL
Above 'A' level	81	-	19	-	45
'A' and equivalent	10	-	37	-	14
'O' and equivalent	3	54	44	60	26
Below 'O' & others	5	46	-	40	15
(N=100%)	681	61	43	55	3684

Base: Those with some qualifications from post-school education courses.

Table 22: Subject of highest education course

Subject	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4
Education/Health	19	3 (2)	(2)	12
Eng/Tech/Science/ Agri.	30	7 (4)	29	6 (3)
Soc. Admin/ Business	31	66	18	54
Misc. Voc./ Prof.	3	16	32	10
Lang/Arts	18	(1)	(2)	17
No. of 'O' levels	(1)	(4)	(4)	(1)
(N=100%)	550	58	38	52

Base: Those with a highest educational qualification course.

Table 23. Age of starting highest education course

Age	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
16 & under	5	48		43	51	
17	5	13		17	13	
18 & over	90	39	*	40	36	N.S.
(N=100%)	691	62		42	55	

Base: Those with a highest educational qualification course.

Table 24: Length of highest education course

Length	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
Under 1 year	19	64		37	69	
1 - 2 years	9	29		34	29	
2 yrs & over	72	7	*	29	(1)	*
(N=100%)	633	58		41	52	

Base: Those with a highest educational qualification course.

Table 25: Type of highest education course.

Type of Course.	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4
Full-time/ sandwich	83	61	56	55
Part-time/ weekend	6	8	9	7
Evening	7	20	9	29
Open Univ./ Correspond.	2	(1)	7 (4)	-
Other	3	9	19	9
(N=100%)	689	64	43	56

Base: Those with a highest qualification course.

Table 26: Sources of income on full-time/sandwich highest education Course

Sources of income	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
Grant & parental/ spouse/work income	94	26		57	23	
No grant but parental/ spouse/work income	6	74	*	43	77	*
(N=100%)	548	34		23	30	

Base: Those with a full-time or sandwich course as their highest qualification course.

Table 27: Income from work during full-time/sandwich highest education course

Income from work	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
Yes	12	50		46	48	
No	88	50	*	54	52	N.S.
(N=100%)	557	36		24	31	

Base: Those with a full-time or sandwich course as their highest educational qualification course.

Table 28: Place of highest education course.

Place of course	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
University/ Polytechnic	65	(1)		(4)	-	
F.E.College	6	24		33	43	
Technical College	8	36		47	27	
Private	5	15		(3)	(11)	
Other	15	24	*	(3)	19	N.S.
(N=100%)	679	62		43	56	

Group 3 Vs 4: F.E. College/Technical College
Base: Those with a highest educational qualification course.

Table 29: Whether highest education course taken with job in mind.

Place of course	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
Yes	63	70		79	70	
No	37	30	N.S.	21	30	N.S.
(N=100	682	63		43	56	

Base: Those with a highest educational qualification course.

Table 30: How highest education course affected long term job prospects

	High performance at 7, 11 and 16.			Low performance at 7, 11 and 16.		
	Expected successes Group 1	Unexpected failures Group 2	Sig.	Unexpected successes Group 3	Expected failures Group 4	Sig.
Improved a lot	70	52		63	45	
Improved a little	23	25		14	31	
Made no difference	7	23	*	23	24	*
(N=100%)	687	64		43	55	

Base: Those with a highest educational qualification course excluding a few who responded as 'don't know' or 'would have been better off not doing the course'.

Table 31: Mixture of apprenticeships and training courses.

	High performance at 7, 11 and 16.			Low performance at 7, 11 and 16.		
	Expected successes Group 1	Unexpected failures Group 2	Sig.	Unexpected successes Group 3	Expected failures Group 4	Sig.
Educ & at least 1 of app/trng	35	25		12		
Just training	25	47		17	43	
Just apprentice/ ship	5	19	*	58	45	*
(N=100%)	384	118		207	345	

Base: Those who had undertaken apprenticeships and/or training.

Table 32: Number of apprenticeships and training courses.

Number	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
1	64	69		76	80	
2	21	17		19	14	
3+	15	14	N.S.	4	6	N.S.
(N=100%)	384	118		207	345	

Base: Those who had undertaken apprenticeships and/or training courses.

Table 33: Number of apprenticeships.

Number	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
0	79	71		23	48	
1+	21	29	N.S.	77	52	*
(N=100%)	384	118		207	345	

Base: Those who had undertaken apprenticeships and/or training courses.

Table 34: Number of non-apprenticeship training courses.

Number	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
0	15	23		63	46	
1	52	50		25	41	
2	20	15		11	7	
3+	14	12	N.S.	(2)	6	*
(N=100%)	384	118		207	345	

Base: Those who had undertaken apprenticeships and/or training courses.

Table 35: Apprenticeships and training course failures.

Number	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
0	86	82		94	57	
1+	14	18	N.S.	6	43	*
(N=100%)	382	116		202	329	

Base: Those who had undertaken apprenticeships and/or training courses.

Table 36: Apprenticeship failures.

Number	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
0	84	72		95	36	
1	16	28	N.S.	5	64	*
(N=100%)	77	32		154	163	

Base: Those who had undertaken an apprenticeship.

Table 37: Training course failures.

Number	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
0	87	86		93	79	
1+	13	14	N.S.	7	21	*
(N=100%)	327	91		76	185	

Base: Those who had had training courses.

Table 38: Highest qualification obtained from apprenticeship or training.

Qualifications	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
Above 'A' level	43	-		12	-	21
'A' and equivalent	32	-		41	-	27
'O' and equivalent	3	46		45	15	27
Below 'O' & others	23	54		(4)	85	25
(N=100%)	228	56		194	67	3355

Base: Those with some qualifications from apprenticeships and/or training

Table 39: Whether highest work related qualification from apprenticeship or training.

Qualification from	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
Apprentice/ ship	21	38		73	28	
Training	79	63	*	27	72	*
(N=100%)	228	56		194	68	

Base: Those with some qualifications from apprenticeships and/or training.

Table 40 Qualification of apprenticeship leading to highest work related qualification.

Qualification	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Total
Above 'A' level	24	-	6	-	11
'A' and equivalent	57	-	47	-	41
'O' and equivalent	-	67	48	11	36
Below 'O' & other	18	33	-	89	13
(N=100%)	49	21	141	19	1579

Base: Those whose apprenticeships led to their highest work related qualification.

Table 41: Trade of apprenticeship leading to highest work related qualification.

Trade	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4
Prof & Managerial	18 (9)	5 (1)	-	-
Educ/Health/ Welfare/Lit./ Arts/Prof. Sci./Clerical/ Sales.	8 (4)	-	-	11 (2)
Security/ Personal Services	-	-	7 (9)	33 (6)
Mat.Proc./ Making & Repair (ex.metal/ electrical)	2 (1)	20 (4)	20 (28)	11 (2)
Making and repairing metal and electrical	69 (34)	55 (11)	57 (79)	22 (4)
Painting/ assembling/ construction/ mining/ transport/ farming	2 (1)	20 (4)	17 (23)	22 (4)
(N=100%)	49	20	139	18

Base: Those whose apprenticeships led to their highest work related qualification.

Table 42: Starting age of apprenticeship leading to highest work related qualification.

Age	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
16	45	76		84	78	
17	20	10		9	-	
18+	35	14	N.S.	8	22 (4)	N.S.
(N=100%)	49	21		140	18	

Base: Those whose apprenticeship led to their highest work related qualification

Table 43: Length of apprenticeship leading to highest work related qualification.

Age	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
Under 3 years	20	19		18	35	
3-4 years	33	24		40	41	
4 years & over	47	57	N.S	42	24	N.S
(N=100%)	45	21		139	17	

Base: Those whose apprenticeship led to their highest work related qualification.

Table 44: Type of apprenticeship leading to highest work related qualification.

Type	High performance at 7, 11 and 16. Expected successes Group 1	High performance at 7, 11 and 16. Unexpected failures Group 2	Low performance at 7, 11 and 16. Unexpected successes Group 3	Low performance at 7, 11 and 16. Expected failures Group 4
Day release	45	24	60	47
Block release	37	57	20	11
Day and block release	6 (3)	14 (3)	18 (26)	16 (3)
Neither	12 (6)	5 (1)	2 (3)	26 (5)
(N=100%)	49	21	141	19

Base: Those whose apprenticeship led to their highest work related qualification.

Table 45: How apprenticeship leading to highest work related qualification affected long term job prospects.

	High performance at 7, 11 and 16. Expected successes Group 1	High performance at 7, 11 and 16. Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Low performance at 7, 11 and 16. Expected failures Group 4	Sig.
Improved a lot	81	71		72	68	
Improved little/made no difference	19	29	N.S.	28	32	N.S.
(N=100%)	48	21		138	19	

Base: Those whose apprenticeship led to their highest work related qualification.
Table excludes a few answering 'would have been better off not doing the apprenticeship'.

Table 46: Qualification of training course leading to the highest work related qualification.

Qualification	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Total
Above 'A' level	47	-	30	-	31
'A' and equivalent	25	-	25	-	16
'O' and equivalent	3	34	38	16	18
Below 'O' and others	25	66	8 (4)	82	36
(N=100%)	179	35	53	48	1776

Base: Those with a training course which led to their highest work related qualification.

Table 47: Subject of training course which led to the highest work related qualifications

Subject	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4
Educ/Health	29	9 (3)	31	13
Eng/Tech/Science/ Agri	28	17	29	23
Soc.Admin/Business	34	51	6 (3)	34
Misc. Voc/ Professional	8	20	33	30
Languages/Arts	(1)	-	-	-
No.of 'O'levels	-	3 (1)	-	-
N = 100%	178	35	51	47

Base: Those with a training course which led to their highest work related qualification.

Table 48: Starting age of training course leading to highest work related qualification

Age	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
17 & under	14	35		32	46	
18-19	39	26		30	20	
20 & Over	47	38	*	38	35	N.S.
N = 100%	175	34		53	46	

Base: Those with a training course which led to their highest work related qualification.

Table 49. Length of training course leading to highest work related qualification

	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
Up to 3 months	15	36		12	45	
Over 3 months under 1 year	24	39		33	32	
1 year & over	61	24	*	55	23	*
N = 100%	158	33		51	47	

Base: Those with a training course which led to their highest work related qualification.

Table 50: Type of training course leading to highest work related qualification

Type	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
Full-time	35	51		43	42	
Day release	43	26		34	33	
Block release	12	3 (1)		11	2 (1)	
Mixture/other	10	20	*	11	23	N.S.
N = 100%	178	35		53	48	

Base: Those with a training course which led to their highest work related qualification.

Table 51. Place of training course leading to highest work related qualification

	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
College	54	53		60	38	
Employers training course	27	32		25	35	
Combination & other	19	15	N.S.	15	27	N.S.
N = 100%	179	34		53	48	

Group $3V_S4$: College/rest $p<.05$

Base: Those with a training course which led to their highest work related qualification.

Table 52: How training courses leading to highest work related qualification affected long term job prospects.

	High performance at 7, 11 and 16.			Low performance at 7, 11 and 16.		
	Expected successes Group 1	Unexpected failures Group 2	Sig.	Unexpected successes Group 3	Expected failures Group 4	Sig.
Improved a lot	69	40		67	58	
Improved little	17	27		18	17	
Made no difference	13	33	*	16	25	N.S.
N = 100%	172	33		51	48	

Base: Those with a training course which led to their highest work related qualification.

Table 53: Type of school and percentage in non-maintained sector.

	High performance at 7, 11 and 16.			Low performance at 7, 11 and 16.		
	Expected successes Group 1	Unexpected failures Group 2	Sig.	Unexpected successes Group 3	Expected failures Group 4	Sig.
Comprehensive	51	53		71	69	
Grammar	46	39		-	-	
Secondary Modern	3	8	*	29	31	N.S.
(N=100%)	735	223		233	1105	
% in non-maintained schools	18	6	*	-	-	
(N=100%)	917	244				

Table 54: Sex composition of schools.

	High performance at 7, 11 and 16.			Low performance at 7, 11 and 16.		
	Expected successes Group 1	Unexpected failures Group 2	Sig.	Unexpected successes Group 3	Expected failures Group 4	Sig.
Boys in boys schools	45	45		17	16	
Boys in mixed schools	55	55	N.S.	83	84	N.S.
(N=100%)	507	113		189	516	
Girls in girls schools	55	33		23	15	
Girls in mixed schools	45	67	*	77	85	N.S
(N=100%)	409	130		52	652	

Table 55: Pupil-teacher ratio.

	High performance at 7, 11 and 16.			Low performance at 7, 11 and 16.		
	Expected successes Group 1	Unexpected failures Group 2	Sig.	Unexpected successes Group 3	Expected failures Group 4	Sig.
< 15	26	18		15	13	
> 15-16	20	18		12	12	
> 16-17	21	23		16	16	
> 17-18	17	23		25	23	
> 18+	16	19	*	32	36	N.S.
(N=100%)	851	233		227	1067	

Table 58: Teacher's rating of child's ability in mathematics.

	High performance at 7, 11 and 16.		Low performance at 7, 11 and 16.	
	Expected successes Group 1	Unexpected failures Group 2	Unexpected successes Group 3	Expected failures Group 4
Child's ability in Maths:				
Capable of 'A' level	55	15	-	-
Above average/ 'O' level	38	55	3	1
Average, CSE 2-4	6	26	42	18
Below average/ possible CSE	1	4	33	32
Little if any ability in subject	(3)	(1)	23	50
(N=100%)	894	237	237	1129

Table 59: Whether child would benefit from staying on at school beyond minimum school leaving age.

	High performance at 7, 11 and 16.		Low performance at 7, 11 and 16.	
	Expected successes Group 1	Unexpected failures Group 2	Unexpected successes Group 3	Expected failures Group 4
Yes	92	63	19	11
No	3	21	68	78
Uncertain	5	16	13	12
(N=100%)	904	239	237	1161

Table 60: Teacher's recommendation for suitable further education.

	High performance at 7, 11 and 16.		Low performance at 7, 11 and 16.	
	Expected successes Group 1	Unexpected failures Group 2	Unexpected successes Group 3	Expected failures Group 4
Degree/ B.Ed.	56	10	(1)	-
Adv.F.T. course at Poly/F.E College/ Teacher training	25	29	(4)	(4)
Other F.T. F.E.course	8	21	9	4
P.T. educ. for prof. qual./other P.T.educ.	9	27	47	26
None of above	1	12	42	69
(N=100%)	897	238	235	1154

Table 61: Teacher's assessment of child's most likely first job.

Area of job	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4
Professional	66	33	10	6
Clerical	8	32	6	15
Service workers	2	3	12	22
Manual work (industrial)	2	8	50	36
Arts/craft	4	10	5	2
Farming/ Forestry	1	3	4	4
Other	17	11	13	15
(N=100%)	836	219	218	1102

Table 62: Teacher's assessment of parental interest with regard to child's education.

	High performance at 7, 11 and 16.			Low performance at 7, 11 and 16.		
	Expected successes Group 1	Unexpected failures Group 2	Sig.	Unexpected successes Group 3	Expected failures Group 4	Sig.
Paternal figure:						
Over concerned/ very interested	71	48		26	10	
Some interest	19	26		33	29	
Little interest	2	11		21	39	
Can't say	8	15	*	21	22	*
(N=100%)	839	217		209	995	
Maternal figure.						
Over concerned/ very interested	73	50		27	15	
Some interest	19	31		40	36	
Little interest	1	9		17	35	
Can't say	8	10	*	17	14	*
(N=100%)	862	230		217	1090	

Table 63: Teacher's rating of child's behaviour on the Rutter School Behaviour Scale.

Score	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.	Total
0 - 10	99	94		89	73		87
11+	1	6	*	11	27	*	13
(N=100%)	903	242		234	1148		9763

Table 64: School attendance in previous term

Attendance	High performance at 7, 11 and 16. Expected successes Group 1	Unexpected failures Group 2	Sig.	Low performance at 7, 11 and 16. Unexpected successes Group 3	Expected failures Group 4	Sig.
Up to 70%	2	6		6	20	
71-80%	1	6		11	15	
81-86%	4	8		10	14	
87-90%	6	10		10	11	
91-95%	17	22		22	17	
96-100%	71	49	*	41	24	*
(N=100%)	875	232		222	1101	