

*Determination of subject and level*

## 13 Determination of Subject and Level

The subjects that children study from the fourth year and the level at which they study them have a critical influence on their life chances. Subjects traditionally regarded as 'academic' have a high status regardless of utility, so children who gain qualifications in these subjects tend to have much better opportunities than those who do not. In addition, at the time of the study, there was a choice between higher and lower status exams (O level and CSE). GCE O level, first introduced in 1952, was originally intended for the top 20 per cent of the ability range. By the 1970s, however, over 40 per cent of pupils nationally were being entered for one or more GCE O level subjects. In inner London in 1985, 44 per cent of pupils were entered for GCE O levels, 76 per cent for CSEs and 19 per cent not entered for any exam. By the 1980s, the subjects that children were allowed to study, and the level of the examinations they were allowed to enter, had become important issues for many parents, especially for those belonging to ethnic minority groups. However, because of the complex history of the examinations themselves, not many parents fully understood their origins and intentions.

A central objective of this project was to trace the influences on these critical decisions about subjects and levels of study for the individual child. This present chapter first describes the pattern of subjects and levels, and shows how it varies between boys and girls, between ethnic groups, and between social classes. It also considers how far the levels of study are a reflection of the child's actual attainment in reading and maths, as assessed by the second-year test scores, and how far they are influenced by other factors. This is best done by means of a multivariate analysis which shows how the level of study is influenced by sex, ethnic group and social class, after taking account of the child's second year test scores; this analysis also measures the extent of differences between schools in the way they allocate children to higher and lower levels of study.

A total of 2,273 pupils wholly or partially completed the option choice questionnaire shortly after finalising their choices in the third year. What follows is a description of the subjects and exam levels decided at that time, according to the reports of the pupils. It therefore reflects the pupils' perceptions of the decisions just after they had been taken. What was recorded by the teachers could have been different, and the subjects and levels of study could change over the following two years.

## The subjects to be studied

### *The core subjects*

The children were asked what subjects they *had* to study. In fact, English and maths were core subject in all schools, and nearly all pupils were aware of this. In several schools, a science was compulsory, and 12 per cent of children recorded that they had to study a science. Three-quarters (76 per cent) listed physical education (PE) as compulsory, 42 per cent social or careers education, 35 per cent a humanity; less than 2 per cent recorded that a European language was compulsory. Thus in 1984, the compulsory core was a relatively small part of the timetable, while the optional subjects were a relatively large part.

### *Optional subjects*

Pupils were asked to record what 'options' they would be taking next year. The full list of subjects is shown below together with the proportion of all pupils taking each subject.

### Percentage of pupils taking each optional subject

|                       |    |                    |   |                       |   |
|-----------------------|----|--------------------|---|-----------------------|---|
| Geography             | 43 | Modular science    | 4 | Environmental science | 1 |
| Biology               | 37 | Science at work    | 4 | Geology               | 1 |
| Physics               | 35 | Sociology          | 4 | Applied science       | 1 |
| History               | 33 | Textiles           | 4 | Engineering science   | 1 |
| Art                   | 28 | RE                 | 4 | General craft         | 1 |
| Chemistry             | 27 | Economics          | 4 | Basic skills          | 1 |
| Graphical comm.       | 24 | Office practice    | 4 | Islamic studies       | 1 |
| French                | 23 | Motor engineering  | 4 | Business skills       | 1 |
| Careers, social ed.   | 22 | Commerce           | 4 | Italian               | * |
| Computing             | 20 | Human biology      | 3 | Latin                 | * |
| Typing                | 18 | Community studies  | 3 | Asian languages       | * |
| Social studies        | 18 | Humanities         | 3 | Creative craft        | – |
| Woodwork              | 14 | Art and design     | 3 | General studies       | – |
| Home economics        | 12 | Bengali            | 3 | DIY                   | – |
| Integrated science    | 11 | Modular technology | 3 | Combined materials    | – |
| Drama                 | 11 | Sculpture, pottery | 2 | Punjabi               | – |
| Needlework            | 10 | Urdu               | 2 | Engineering           | – |
| Metalwork             | 10 | Printmaking        | 2 | Communications        | – |
| Childcare             | 10 | English literature | 2 | European languages    | – |
| Food and nutrition    | 7  | ESL/Cambridge      | 2 | Construction          | – |
| German                | 6  | Other science      | 2 | Multimedia            | – |
| Music                 | 4  | Spanish            | 2 |                       |   |
| CDT                   | 4  | Art and craft      | 2 |                       |   |
| Design and technology | 4  | Recreational       | 2 |                       |   |
| Technology            | 4  | Electronics        | 1 |                       |   |

### *Classification of subjects*

Some of the following analyses show the detailed subjects (or the more common ones). Others group the subjects into 12 broad categories, as follows.

|            |   |
|------------|---|
| Science I  | Physics, chemistry, biology, human biology, technology, electronics, computing. These are traditionally the higher-status science subjects. |
| Science II | Integrated, combined, general, applied, environmental science; science at work. These are traditionally the lower-status science subjects.  |

### *The School Effect*

|                                |   |
|--------------------------------|---|
| Humanities and social sciences | History, geography, social studies, religious education, English literature, sociology, economics, classical and Islamic studies.   |
| European languages             | French, German, Spanish, Italian, Latin.  |
| Asian languages                | Bengali, Punjabi, Urdu  |
| Commerce                       | Typing, office practice, commerce. These are subjects traditionally studied by girls.   |
| Practical I                    | Graphical communications, craft, geography, technology, woodwork, metalwork (including jewellery-making), engineering, construction, combined materials, general craft, do-it-yourself. These are subjects traditionally studied by boys. |
| Practical II                   | Home economics, food and nutrition, needlework, embroidery, child care. These are subjects traditionally studied by girls.  |
| Creative subjects              | Art, art and design, art and craft, drama, music, sculpture, pottery-making, print-making, textiles, media studies.   |
| Remedial/ESL                   | Basic skills, communication, ESL options (taken to Cambridge certificate level in three schools), recreational studies.   |
| Social education and careers   | Optional and compulsory courses in social education, health education, life skills guidance, careers.   |
| Physical                       | Optional and compulsory courses in physical education (PE), games, dance, waterskills.  |

### *Analysis by sex*

Boys were much more likely than girls to take the practical I subjects (associated with boys) and rather more likely to take science subjects as a whole. Girls were more likely to take the commercial subjects and, of course, the practical II subjects (associated with girls). They were also more likely than boys to take European and Asian languages.

Table 13.1 shows the proportion of girls and boys who were taking each of 16 individual subjects (this is not, of course, the complete list). Over half of the boys were taking physics as against only 20 per cent of the girls, but 55 per cent of the girls were taking biology, as against 25 per cent of the boys. The proportion taking chemistry was rather higher among boys than girls, but broadly the results show that about the same proportion of boys and girls were taking a high status science subject, with the girls tending to choose biology and the boys physics. Girls were less likely to be taking computing and geography and more likely to be taking art and drama than boys. Home economics and graphical communication indicate a familiar gender-stereotyped pattern of choice: in the case of graphical communication, the contrast is extreme (44 per cent of boys and 5 per cent of girls were taking this subject). It is clear that in some respects these outcomes are heavily influenced by a traditional view of the role and identity of the sexes, though against this it is significant that a similar proportion of boys and girls are taking high status science subjects. How far this traditional view originates with the pupils and their families or with the schools it is not possible to say, though some of the schools, at least, had reviewed their own policies and made some attempts to change pupils' attitudes towards education and careers for girls.

### ***Analysis by country of origin***

The subjects taken by children of West Indian origin are broadly similar to those taken by children originating from the UK, though a smaller proportion of the West Indians are taking physics and chemistry, and a larger proportion (30 per cent compared with 15 per cent) are taking social studies (see Table 13.2). The Bangladeshis stand out from the other south Asian groups, though it should be remembered that most of them are in just two schools, and a high proportion are girls in school 15. The proportion of Bangladeshis doing history, geography and art is low; the proportion doing both physics and computing is also low, but the proportion doing both chemistry and biology is rather high; the proportion doing typing and textiles is very high in each case. Thus, Bangladeshis show a strong tendency to avoid humanities and other subjects tied in with British or European culture; they also tend to avoid some technical and scientific subjects (but certainly not biology or chemistry); and they are over-represented in a craft subject closely linked with their cultural tradition (textiles) and in the low-status vocational subject of typing, which is traditionally thought suitable for girls.

Among children of Indian and of African Asian origin, a relatively high proportion are taking physics and chemistry; otherwise they are studying a fairly similar range of subjects to children of UK origin, and it is notable that the proportion taking subjects allied to British or to European culture is not significantly lower than for the white British children. Among children of Pakistani origin, the proportion taking science subjects is rather lower than for African Asians or Indians, but is still about the same as for children of UK origin (though there are some differences for specific subjects). There is, however, a clear tendency for children of Pakistani origin to avoid subjects that, as usually taught, are linked with British or European culture, such as geography, French, German, home economics, graphical communication and drama.

When these results are shown separately for boys and girls within each ethnic group (see Table 13.3), they have to be treated with some caution, since the sample sizes become low in some cases, and it is necessary to lump all of the south Asians together (even though we know the Bangladeshis are highly distinct from the other south Asian groups). However, some points are worth noting. The proportion of West Indians doing physics and chemistry is rather low for both sexes, but the proportion of West Indian girls doing biology is very high (71 per cent). This may be linked with the fact that a high proportion of West Indian women have in the past worked in the health services. Both West Indian boys and girls are more likely to do social studies and drama than other groups. West Indian boys are less likely to do history and geography than boys of UK origin, but the same does not apply to West Indian girls: in fact, more of them do history than of any other group.

The proportion doing the separate science subjects is higher among south Asians overall than among children originating from the UK or from the West Indies. The south Asian boys are particularly likely to do the separate science subjects, and chemistry is more popular among south Asian boys and girls than among other groups. Comparing boys and girls within the same ethnic groups, the contrast in the subjects they are taking is least strong among south Asians, partly because the south Asian girls are quite well represented in the natural science subjects (as opposed to biology), and partly because they are much less attracted to childcare and home economics than other girls. Apparently, therefore, the subject choices of south Asians are less influenced by a traditional view of the roles of the sexes than those of other groups. However, another factor may be that south Asians see

the traditionally female subjects like childcare and home economics as linked with British customs and culturally alien.

### ***Analysis by school***

Table 13.4 shows the proportion of children at each school who were taking one or more subjects within each of the 12 groups defined in an earlier section. There are some very wide variations between schools: these mostly reflect differences in school policies and practices rather than the profile of the pupils at individual schools. Only one of these differences is clearly a reflection of policies at the level of the local education authority: none of the children in area 2 was taking an Asian language, and only two children in area 3 were doing so, compared with 21 per cent of children in area 1 and 9 per cent in area 4. Otherwise there are some differences on average between schools in one area and another, but most of the variation is between schools in the same areas. (Although Asian languages were hardly ever included in the normal curriculum in area 3, some schools in that area had a policy of teaching these languages outside normal school hours: for example, Gujerati was taught at lunch time in school 34.)

Variations between schools in the proportion of pupils taking the higher-status science I subjects, and the humanities, are not particularly large. There are much wider variations, however, in the proportion taking the lower-status science II subjects (integrated, combined, environmental science, and so on). For example, the proportion taking one or more science II subjects is 51 per cent in school 43, but 4 per cent in school 44 in the same area. There are also wide variations between schools in the proportions taking subjects in the following groups: European languages, commerce, practical I (traditionally thought suitable for boys), practical II (traditionally thought suitable for girls), creative, social education and careers, and physical education. The following examples of the proportion of pupils taking subjects in these groups will convey some impression of the size of these variations.

#### *European languages*

School 33, 58 per cent; school 45, 8 per cent

#### *Commerce*

School 22, 59 per cent; school 25, 13 per cent; school 43, zero

#### *Practical I*

School 14, 71 per cent; school 45, 74 per cent; school 31, 30 per cent (all of these schools are co-educational)

#### *Practical II*

School 32, 61 per cent; school 25, 18 per cent; school 15, a girls' school with a high proportion of Bangladeshis, 8 per cent

#### *Creative*

School 23, 89 per cent; school 22, 28 per cent; school 34, 18 per cent

#### *Social education and careers*

School 34, 84 per cent; school 33, 9 per cent;  
School 43, 81 per cent; school 42, 1 per cent

#### *Physical education*

This was compulsory in some schools (for example, school 22) but not in most. Where it was not compulsory, there were still very wide variations. For example, school 32, 79 per cent; school 33, 22 per cent.

The general conclusion to be drawn from these extraordinary findings is that different schools, often within the same education authorities, were steering children into studying widely different subjects. The subjects have had to be grouped for this analysis, and in nearly all cases a school is offering something within each group; however, what is on offer within each group may vary widely between schools, and this probably accounts for a considerable part of the variation. In addition, as described in the last chapter, the schools may steer children into some subjects and away from others, in response to various pressures and demands. The result is that the content of the education provided in the two years leading up to the fifth year exams varies dramatically from one school to another.

### ***Balance***

As already noted, the Department of Education and Science considers it important that all pupils should study a balanced curriculum. The range of subjects taken by each pupil was therefore analysed in the light of the need for balance. A minimal criterion is that each pupil should study English, maths, a science and a humanity. The results show that 83 per cent of boys and 86 per cent of girls met this criterion. If a practical subject and a language is added, this produces the definition of a balanced curriculum laid down in *Better Schools*. Only 14 per cent of boys and 22 per cent of girls had a 'balanced' curriculum in these terms; if a creative subject is added as well, this drops to 4 per cent of boys and 8 per cent of girls.

Pupils of West Indian origin had a less balanced curriculum than those belonging to other ethnic groups. The proportion who had a balanced curriculum in the terms laid down in *Better Schools* was 13 per cent of pupils of West Indian origin, compared with 19 per cent of the other ethnic groups. When curriculum balance is analysed by socio-economic group it appears that, on the minimal criterion, the higher the socio-economic group the more balanced the curriculum; however, when other subjects are added, it is the lower socio-economic groups who are more likely to have a balanced curriculum. This may be accounted for by larger numbers of middle-class pupils taking several science subjects. As one teacher noted: 'Balance for a bright child can mean three sciences, computer studies and accounts'. There are considerable differences in curriculum balance between schools and areas. All area 1 schools had a low proportion of pupils taking a balanced curriculum, but school 21 had the lowest proportion of all, maybe because an O level package was offered in physics, chemistry, graphics and technology. Schools in area 4 appear to have the best balanced curriculum; in particular, school 43 has pupils choosing the most balanced curriculum on all of the three criteria.

### **Level of course taken**

For each course they were to take, pupils were asked to record the level of the course, by choosing one of the following.

- Non-exam
- CSE/non-exam
- CSE
- CSE/O level

- 16+ exam
- O level (direct entry)
- Other (mostly courses leading to other exams)

The distinction between 'O level direct entry' and 'CSE/O level' is that in the one case it is decided from the beginning that the pupil will be taking O level, while in the other case the decision between O level and CSE will be taken at a later stage. Similarly, 'CSE/non-exam' means that a decision will be taken later as to whether the pupil will take CSE.

Table 13.5 is based on the subjects to be taken, so that each subject (rather than each pupil) is a separate entry in the table. It shows the proportion of subjects (in each subject group) that were to be taken at each course level. Both maths and English were to be studied on direct entry O level courses in about one-fifth of cases; in the majority of cases, they were to be studied on CSE or CSE/O level courses, and rarely on courses that would not lead to an exam. A relatively high proportion of the higher-status science I subjects (35 per cent) were to be studied on direct entry O level courses, whereas a high proportion of the science II subjects (61 per cent) were to be studied on CSE courses, and a significant proportion (16 per cent) on non-exam courses. The course levels for the humanities were similar to those for maths and English, except that there was a significant minority (10 per cent) of non-exam humanities courses. Courses in European languages, though rather small in number, tended to be at a high level: 40 per cent were O level direct entry. It is notable that most social education and careers courses (66 per cent) do not lead to exams.

Direct entries to O level courses are a useful indicator of course levels for different groups. Table 13.6 shows the proportion of subjects that are to be studied on direct entry O level courses, by ethnic group. In the case of maths and English, the proportion going directly onto O level courses is considerably higher for pupils originating from the UK than for south Asians or those originating from the West Indies. In the case of maths, for example, these figures are 22 per cent for pupils of UK origin, 14 per cent for south Asians, and 14 per cent for West Indians. In the case of the higher status science I subjects, there is no significant difference between children of UK and of south Asian origin, but among those of West Indian origin, the proportion of O level direct entries is again distinctly lower. In the case of the humanities, the proportion going directly onto O level courses is distinctly higher than for either of the main minority groups.

It was reported in Chapter 9 that the second-year reading and maths scores were lower among children of south Asian and West Indian origin than among those of UK origin. If the allocation to course levels is made on the basis of attainment, therefore, we would expect the two main minority groups to be allocated to lower level courses, on average. Whether the allocations to course levels of the different ethnic groups can be wholly explained in terms of second-year attainment scores will be considered in a later section.

Differences in course allocations between social classes are much more striking than the differences between ethnic groups. For example, 29 per cent of children belonging to non-manual families went onto direct entry O level courses in maths, compared with 12 per cent of those belonging to the families of unskilled or semi-skilled manual workers. A similar pattern is shown in the case of English. For the most part, these differences are equally striking in the case of the optional subjects. For example, in the case of the practical II subjects (traditionally associated with girls), where the child belongs to a non-manual family, the subject was to be taken on a direct entry O level course in 31 per cent of cases, but in only 16 per cent of cases where the child belongs to an unskilled or semi-skilled

manual family. Again, a similar pattern is shown for the creative subjects. Thus, the level of course to which the child is allocated is strongly related to social class not only in the case of the traditional academic subjects, but also in the case of the practical and creative subjects.

Like the differences between ethnic groups, the social class differences are related to differences in second-year attainment between social class groups. However, it is important to note that the allocations to course levels are not purely a function of second-year test scores. One way of looking at this is to compare pupils whose second-year test scores were above the upper and below the lower quartile (the highest-attaining 25 per cent and the lowest-attaining 25 per cent). Taking the reading test as the criterion, among those above the upper quartile, 60 per cent were allocated to direct entry O level courses in English, compared with 14 per cent of those below the lower quartile. This shows that attainment was a major determinant of the allocation. Yet a considerable number of low-attaining children were allocated to high course levels: as mentioned above, 14 per cent of those below the lower quartile were nevertheless put into direct entry O level courses in English. Also, a considerable number of high-attaining children were put into lower-level courses: thus, 11 per cent of those above the upper quartile were put into CSE or non-exam courses.

A comparable analysis, using the second-year maths score as the criterion, has been carried out of the course levels to which children were allocated in maths. The pattern of results is very similar.

These findings are important, because decisions about course levels are made somehow, and if they are not purely a reflection of the child's assessed attainment, then there is room for them to reflect irrelevant factors (like sex, social class or ethnic group) or prejudice (for example, in favour of attractive children) or for them to be arbitrary. In any case, the rationale for teaching subjects at different levels is that not all children are capable of learning at the same level; this obviously breaks down if the allocation to course levels is not on the basis of ability.

### **Variance components analysis**

The purpose of this further analysis is to show how far the allocation to course levels is determined by second-year attainment and how far by other factors. It has already been shown that the allocation is not just a function of attainment, and that course levels are also related to social class and to ethnic group. However, we need to establish whether these apparent relationships with social class and ethnic group arise because these factors are in turn associated with second-year attainment. For this, a multivariate model is required. A further question is whether the process of allocation is significantly different in one school from another. For example, it is possible that some schools may allocate purely (or mostly) on the basis of attainment, and others not. To answer this sort of question, the method of variance components analysis (first introduced in Chapter 10) must be used.

The basic statistic used for this analysis is the 'course level score'. The various course levels are scored as follows.

|                           |   |
|---------------------------|---|
| Non-exam                  | 1 |
| CSE/non-exam              | 2 |
| CSE                       | 3 |
| Others (including<br>RSA) | 3 |
| 16+ exam                  | 4 |

|                |   |
|----------------|---|
| CSE/O level    | 4 |
| O level direct | 5 |

The score is produced by adding the values for the individual subjects recorded for an individual pupil, then dividing by the number of subjects recorded. Thus, the score reflects the average course level at which the pupil will be studying. The reason for adopting this approach is that the number of subjects studied varies significantly between schools (as well as between individuals) depending on policies that are not connected with course levels. Also, some pupils omitted some subjects from the list, where they should have been included. The average course level is therefore a more reliable and suitable measure than the total obtained by adding the scores for the individual subjects.

Table 13.7 shows the average course level score for each school. Although there is some variation, the differences are not large, bearing in mind the very wide differences in average test scores between the schools (see Chapter 9). This suggests that schools tend to adjust the standard required for a given course level according to the ability profile of the pupils; so in a school with a low attainment profile, the level of attainment required to get onto an O level course will be lower than in a school with a high attainment profile. In that way, the proportion of pupils doing courses at different levels remains fairly similar in the schools with very different levels of attainment.

However, the more basic question is how far the allocation to course levels depends on attainment at the level of the individual child. As a first approach to this question, Table 13.8 shows the coefficients of correlation between the course level score and the second-year maths and reading scores. For pupils across all schools, this correlation is 0.43 in the case of maths and 0.42 in the case of reading. These relationships are not particularly strong. The findings imply that the second-year test scores account for about one-fifth of the variance in the course levels to which the children are allocated. Of course, one reason why the relationship is not stronger is that all of the measures involved are imperfect. This means that, for example, the school's assessment of a child's attainment in maths may legitimately be different from an assessment based on a single test score obtained at the end of the second year. Nevertheless, the findings suggest that there is plenty of room for factors other than assessed attainment to play a part in the allocation to course levels.

Table 13.8 also shows very clearly that the strength of the relationship between attainment and course level varies considerably between schools. This finding is easier to interpret than the absolute level of the correlation. It shows without a doubt that the allocation to course levels is done much more closely on the basis of attainment in some schools than in others. Indeed, if reading is taken as the measure of attainment, the lowest correlation shown (in school 12) is 0.15, while the highest (in school 33) is 0.80.

A variance components model provides a more powerful analysis of the determinants of the average level of the courses to which the individual child is allocated. The outcome is the course level score; the independent variables included are sex, socio-economic group, second-year reading score, and country of origin. The fixed part of the model shows how these variables are related to the course level score, without taking account of school differences. As expected, the most important determinant of the course level score is the second-year reading score, but after taking account of the reading score, social class still has a significant effect. This means that middle class children with a given reading score tend to be allocated to higher level courses than working class children with the same reading score. There is also a significant tendency for south Asian children to be allocated to higher course levels than those of UK or other (including West Indian) origin. There is no significant difference between boys and girls in this respect.

These results can be illustrated by showing the course level scores predicted for a child with various characteristics (Table 13.10). These illustrations make it clear that the second-year reading score is the dominant factor (among the variables included in the model), and that by comparison social class has rather a small influence. Thus, the difference in course level score between a child with a reading score of 40 and one with a reading score of 110 is about one point, while the difference between a child from an unskilled family and a professional or managerial family is 0.16 of a point.

A similar model was set up using the second-year maths score instead of the reading score as the measure of attainment. Some of the scores predicted from that model are also shown in Table 13.10. In this context, social class appears to have considerably more influence on the course level score, and it has almost as much influence as the second-year maths score. This suggests that the schools actually allocate children between course levels on criteria much more akin to the reading score than to the maths score. Consequently, the maths score is not a very good predictor, and in the model using the maths score, social class appears to take on more significance only because attainment in reading has not been taken into account.

So far the discussion has been confined to the fixed part of the variance components model, which describes the relationships across all schools. The random part of the model, by contrast, describes the way in which these relationships vary between schools. At the first stage, only the grand mean is allowed to vary in the random part. This allows for the possibility that the course level score is higher in some schools than in others, after taking account of the effects of sex, social class, second-year reading score and ethnic group. There is a substantial improvement, significant at a very high level of confidence, in the predictions produced by the model when the grand mean is placed in the random part, which shows that there are differences between schools in the course levels to which comparable children are allocated. These differences are large. There is a range of about 0.6 on the course level score predicted for the same child, depending on which school he or she goes to.

The second stage tests for improvements in the predictive power of the model by placing each of the other variables in the random part. The results show that three variables - the second-year reading score, country of origin and socio-economic group - have significantly different relationships with the course level score from one school to another. In the case of the second-year reading score, these differences are fairly large. This means that in allocating pupils to course levels, some schools use criteria closely akin to a measure of general attainment (like the reading score), whereas others rely much less on attainment. This confirms the interpretation of the straightforward correlations between test scores and course level scores shown in Table 13.8. Schools 33, 24 and 31, and to a lesser extent schools 23, 32, 15 and 21, show a stronger than average association between reading test and course level score; conversely, schools 12, 14, 45 and 22 show a weaker than average relationship of this kind.

## **Conclusions**

There are some large differences in the subjects taken by girls and boys in the fourth and fifth years. These differences continue long-established tendencies, and reflect traditional views of the roles of the sexes. On the other side, a hopeful sign is that a similar proportion of boys and girls were taking a high status science subject, though it was likely to be biology in the case of a girl and physics in the case of a boy. It is impossible to say how far the traditional view is perpetuated by the children and the families, or how far it is imposed or

reinforced by the schools. Some schools, at least, had changed their policies, and made some attempts to change pupils' attitudes towards education and careers for girls.

The subjects taken by children of West Indian and of UK origin are broadly similar. However, the proportion of West Indians doing physics and chemistry is rather low for both sexes, but the proportion of West Indian girls doing biology is very high (71 per cent). This is probably linked to the fact that a relatively high proportion of West Indian women have in the past pursued careers in the health services. Bangladeshis stand out as taking a very different set of subjects from other groups, but the sample is mainly concentrated in only two schools. The best interpretation of this pattern is that Bangladeshis tend to avoid subjects that are closely linked with aspects of British or European culture that are felt to be alien. Other south Asians show a strong tendency to take high-status science subjects.

The pattern of subjects studied in the fourth and fifth years varies dramatically from one school to another. This is partly because different schools offer different particular subjects within each subject group, and some of these are found much more attractive than others. In addition, as described in the last chapter, the schools may steer children into some subjects and away from others, in response to various pressures and demands. The result is that the content of education may vary enormously between schools.

Only 14 per cent of boys and 22 per cent of girls had a balanced curriculum in terms of the definition set out in *Better Schools*. There are considerable differences in curriculum balance between schools and areas.

The levels of the courses to which children are allocated in the various subjects vary according to social class, ethnic group and second-year test scores. There is a strong tendency for middle class children to be put on higher-level courses than working class children, and a fairly strong tendency for children of UK origin to be put on higher-level courses than those of south Asian or West Indian origin. While second-year attainment is related fairly strongly to the course allocations, this relationship is far from perfect: in fact, the reading score accounts for only one-fifth of the variation in course levels. Also, an important minority of low-attaining children are put on the highest level courses (direct entry O level), while an equally important minority of high-attaining children are put on the lowest level courses (CSE or non-exam).

A multivariate analysis shows that after taking account of the reading scores and of social class, ethnic minorities are not disadvantaged in terms of course levels: in fact, south Asians are put on higher-level courses than would have been expected from their test scores and social class. However, social class does influence the allocations, after allowing for the effect of the test scores. There is no difference between the course levels allocated to boys and girls.

These findings show that while children belonging to ethnic minority groups tend overall to be allocated to lower course levels than children of UK origin, this is because they tend on average to have lower assessed attainment and to belong to lower social classes: it is not because ethnic group is itself being used as a criterion in the allocation to course levels.

There are large differences between schools in the way they allocate children to course levels. These differences are of two kinds. First, the course levels are higher at some schools than at others for children of comparable attainment. It seems that these differences of policy tend to compensate for differences in school intakes. Schools with high attainment profiles use higher criteria than those with lower attainment profiles, so that the proportion of children taking courses at a given level tends to be the same in schools with widely different profiles of attainment. Second, schools vary widely in the extent to which

they use attainment as the main criterion for deciding course level. All of these schools are effectively teaching fourth and fifth year children in separate sets, leading to different exams, or to no exam at all. However, some are sorting them into sets on criteria akin to the second-year reading or maths test, while others are giving little weight to such criteria. Given that there are sets, it seems rational to allocate children between them on the basis of attainment. This suggests the hypothesis that schools which do allocate according to attainment will achieve better results.

The whole pattern of these findings illustrates the fact that the academic level at which a child is expected to compete is more a function of school policies and practices than of the individual qualities of the child. For example, the level of prior attainment thought appropriate for children entering O level courses varied substantially between schools, largely according to the mix of attainment. It follows that the same child, with the same history of attainment, would be placed on O level courses in one school but not in another. This suggests that a higher proportion of children could be required or expected to compete at a higher academic level. Where decisions have to be made about the course levels to which children should be allocated, prior attainment is a relevant criterion. This should not be allowed to obscure the fact that the children currently placed on lower level courses (because their prior attainment has been low) would in many cases be capable, with the appropriate teaching, of tackling more difficult work.