

Uptake of GCSE subjects 2011

Statistics Report Series No.44

Tim Gill

September 2012

Research Division
Assessment, Research and Development
Cambridge Assessment
1 Regent Street, Cambridge, CB2 1GG

Introduction

This report looks at the uptake of GCSE subjects in England in 2011. The data for these analyses were taken from the National Pupil Database (NPD). This is a database held by the Department for Education, consisting of results for all students in all subjects in schools and colleges in England, as well as pupil and school background characteristics such as age, gender, ethnicity and level of deprivation.

For the analysis of uptake at GCSE the Key Stage 4 (KS4) extract of the NPD was used, consisting of all students who were at the end of KS4 in 2011 (i.e. in year 11). Uptake in this report is defined as the percentage of these students taking a GCSE in the subject, and includes exams taken by these students in previous years.

Table 1 presents a breakdown of the number of GCSEs taken by students.

Table 1: Number of GCSEs taken (% of GCSE students)

Number of GCSEs	Percentage
1	1.4
2	3.0
3	5.1
4	6.9
5	8.7
6	10.2
7	11.9
8	13.9
9	17.0
10	13.5
11	6.2
12+	2.2
No of students	603,098

Uptake of GCSEs in this report is presented by different student classifications: gender, school type, prior attainment, school gender and deprivation level. In the following tables the numbers of students in each of the classifications are presented.

School type

There are several different types of school where students study for GCSEs. For this report these were classified into five groups. Table 2 presents the number and percentage of GCSE students attending each school type.

Table 2: GCSE students by school type

School type	Number of students	Percentage
Academy	100,390	16.7
Comprehensive	414,963	68.8
Grammar	14,618	2.4
Independent	50,673	8.4
Secondary Modern	22,284	3.7

Pupil attainment

Students were classified by their attainment at GCSE. GCSE grades were converted into scores (A* = 8, A= 7, B= 6 etc) and a mean GCSE was calculated for each student, which was then used to divide students up into three approximately equally sized attainment groups: low, medium and high. Table 3 presents the number in each group as well as the mean, minimum and maximum value of mean GCSE for each group.

Table 3: GCSE students by attainment

Pupils' attainment group	Number of students	Minimum	Maximum	Mean
Low	200,813	1.0	4.4	3.3
Medium	198,690	4.4	5.7	5.1
High	200,763	5.7	8.0	6.6

Deprivation level

The level of deprivation that a student experiences was measured by the Income Deprivation Affecting Children Index (IDACI). This is a measure of the proportion of children in a very small geographical area (Lower Layer Super Output Area or LSOA) who live in families that are income deprived. It varies between 0 and 1, with 0 representing minimum deprivation and 1 maximum deprivation.

It should be noted that there was some missing data for this measure (8.1% of students had no record). Students who did have a measure of deprivation were divided up into three equally sized groups. Table 4 presents the number of students and the mean, minimum and maximum IDACI values in each group.

Table 4: GCSE students by deprivation level

Pupils' deprivation group	Number of students	Minimum	Maximum	Mean
Low	182,927	0.00	0.10	0.06
Medium	182,911	0.10	0.26	0.17
High	182,934	0.26	0.99	0.42

School gender

The school gender variable was determined by the female ratio (number of females over the total number of students) in the school. If this ratio was greater than 0.95, the school was considered to be a "Girls" school. If the female ratio was less than 0.05, then the school was designated a "Boys" school. The rest of the schools were considered "Mixed" schools. Table 5 shows the numbers and percentages of students attending the different types of schools.

Table 5: GCSE students by school gender

School gender	Number of students	Percentage
Boys school	32,044	5.3
Girls school	48,293	8.0
Mixed school	522,761	86.7

Number of GCSEs taken

The number of GCSEs taken by students in each of the classifications is presented in Tables 6-9. For example, Table 6 shows that 14.7% of students in Academies took 9 GCSEs, compared with 23.4% of students in independent schools. Table 7 shows that 5.3% of students with low attainment took 9 GCSEs, compared with 24.7% of students with high attainment.

Table 6: Number of GCSEs taken, by school type (% of students)

Number of GCSEs	Acad	Comp	Grammar	Ind	Sec Mod
1	1.2	1.2	0.2	3.5	1.4
2	4.0	2.8	0.2	2.9	4.3
3	6.0	5.1	0.3	3.6	7.2
4	7.6	7.0	0.3	5.2	9.6
5	8.9	9.0	0.3	6.4	12.1
6	9.7	10.7	0.7	8.2	12.4
7	10.8	12.6	1.5	9.6	14.4
8	12.1	14.8	4.2	13.6	13.5
9	14.7	16.9	18.4	23.4	12.8
10	14.4	12.3	38.4	17.0	7.9
11	7.4	5.5	25.4	5.3	3.4
12+	3.0	2.0	10.0	1.1	1.0
Number of students	100,390	414,963	14,618	50,673	22,284

Table 7: Number of GCSEs taken, by attainment (% of students)

Number of GCSEs	Low	Medium	High
1	1.9	0.4	0.9
2	6.9	1.4	0.6
3	12.2	2.3	0.6
4	14.9	4.6	1.3
5	17.2	6.9	2.0
6	15.7	11.6	3.3
7	14.0	14.8	7.0
8	9.7	19.4	13.0
9	5.3	21.2	24.7
10	1.9	12.6	26.3
11	0.4	3.7	14.6
12+	0.1	1.0	5.6
Number of students	200,813	198,690	200,763

Table 8: Number of GCSEs taken, by deprivation level (%of students)

Number of GCSEs	Low	Medium	High
1	0.3	0.6	1.2
2	1.0	2.4	5.1
3	2.2	4.6	8.4
4	3.7	6.8	10.7
5	5.6	9.0	12.3
6	7.7	10.9	12.8
7	10.7	12.9	13.0
8	14.9	14.8	12.7
9	21.1	16.7	11.7
10	19.3	12.9	7.7
11	9.8	6.2	3.2
12+	3.6	2.3	1.2
Number of students	182,927	182,911	182,934

Table 9: Number of GCSEs taken, by school gender (%)

Number of GCSEs	Boys school	Girls school	Mixed school
1	1.7	1.2	1.4
2	2.8	1.0	3.2
3	4.2	1.8	5.4
4	5.7	3.5	7.3
5	7.5	4.8	9.1
6	8.2	6.4	10.6
7	8.2	8.8	12.4
8	10.4	12.5	14.3
9	16.7	22.5	16.5
10	19.7	23.6	12.2
11	11.3	10.0	5.6
12+	3.7	3.9	2.0
Number of students	32,044	48,293	522,761

Uptake of individual GCSE subjects

In the following tables the uptake of individual subjects is presented, broken down into the classifications outlined above. Subjects with an overall uptake level of less than 1% are not included. In each table the subjects are ordered by overall uptake (highest first). Thus, English Language had the highest level of uptake, being taken by 96.4% of all GCSE students, 95.8% of males and 97% of females.

It is worth noting that the expectation is that virtually all pupils take some core subjects, such as English and mathematics. However, the increasing popularity, particularly in independent schools, of IGCSEs (which are not currently recorded in the NPD) means that the percentages for these subjects are reduced somewhat in these tables.

Table 11: Uptake of individual subjects by gender (% of students)

Subject	Boys	Girls	All
English Language	95.8	97.0	96.4
Mathematics	95.2	96.1	95.6
English Literature	69.4	79.1	74.2
Science (Core)	57.3	60.1	58.6
Additional Science	40.8	43.2	42.0
Religious Studies	29.3	35.6	32.4
History	32.0	32.5	32.2
Geography	29.2	24.2	26.7
French	19.5	27.6	23.5
Biology	23.5	21.2	22.3
Chemistry	23.1	20.6	21.9
Physics	23.0	20.4	21.7
Physical Education/Sports Studies	20.4	11.2	15.8
Art & Design	9.4	18.2	13.8
Drama & Theatre Studies	9.3	15.3	12.3
Statistics	10.4	9.7	10.1
Spanish	8.0	11.5	9.7
German	9.0	10.4	9.7
D&T Resistant Materials	16.1	2.9	9.6
D&T Food Technology	6.5	11.4	8.9
Business Studies:Single	10.4	7.3	8.9
Media/Film/Tv Studies	8.6	9.0	8.8
Art & Design (Fine Art)	5.9	10.8	8.3
D&T Graphic Products	8.4	6.1	7.2
Music	7.3	6.9	7.1
D&T Textiles Technology	0.3	10.9	5.6
Information & Communications Technology	5.7	4.9	5.3
D&T Product Design	6.8	3.6	5.2
Sociology	1.7	4.3	3.0
Office Technology	2.9	2.9	2.9
Home Economics: Child Development	0.1	5.8	2.9
Humanities: Single	2.3	2.4	2.4
Dance	0.3	4.0	2.1
Additional Mathematics	2.0	1.7	1.9
Home Economics: Food	1.2	2.2	1.7
D&T Electronic Products	3.0	0.3	1.6
Art & Design (Photography)	1.2	2.0	1.6
Psychology	0.9	2.0	1.4
Social Science: Citizenship	1.3	1.5	1.4
Latin	1.3	1.4	1.4
Art & Design (Textiles)	0.1	2.3	1.2
General Studies	1.1	1.0	1.0
Expressive Arts & Performance Studies	0.8	1.3	1.0

Table 12: Uptake of individual subjects by school type (% of students)

Subject	Academy	Comprehensive	Grammar	Independent	Secondary Modern
English Language	96.5	97.5	99.6	85.6	97.6
Mathematics	98.7	98.7	99.2	61.4	98.9
English Literature	72.5	74.3	96.8	74.4	65.8
Science (Core)	56.5	62.0	37.8	38.0	67.6
Additional Science	40.5	43.8	34.1	31.8	43.8
Religious Studies	26.7	33.9	41.1	31.8	27.1
History	32.2	30.6	52.7	42.2	26.2
Geography	26.0	24.9	47.7	39.1	21.3
French	22.8	21.2	47.4	41.2	14.6
Biology	23.4	19.3	64.3	38.2	10.9
Chemistry	22.8	19.0	64.0	36.5	10.3
Physics	22.9	18.9	64.1	35.0	10.3
Physical Education/Sports Studies	16.3	16.1	17.1	13.8	12.9
Art & Design	13.2	13.8	13.1	14.6	13.6
Drama & Theatre Studies	12.3	11.9	13.6	16.8	9.3
Statistics	11.5	10.1	16.2	4.2	12.4
Spanish	8.7	8.3	25.0	20.6	6.7
German	11.3	8.7	28.1	12.2	1.8
D&T Resistant Materials	9.2	9.5	10.8	11.0	9.4
D&T Food Technology	8.9	9.8	7.8	2.3	9.2
Business Studies:Single	10.2	8.7	15.9	7.1	5.9
Media/Film/Tv Studies	8.5	9.8	4.1	1.8	9.0
Art & Design (Fine Art)	7.4	7.9	12.8	13.2	6.1
D&T Graphic Products	6.9	7.9	9.5	2.0	6.7
Music	7.0	6.7	12.1	10.7	4.5
D&T Textiles Technology	5.7	6.0	6.2	2.1	4.2
Information & Communications Technology	5.6	4.3	14.8	9.9	5.7
D&T Product Design	5.5	5.3	6.5	3.6	5.4
Sociology	2.8	3.4	1.4	0.7	2.7
Office Technology	3.4	2.8	3.2	2.1	3.7
Home Economics: Child Development	2.4	3.3	0.5	0.8	3.5
Humanities: Single	2.9	2.5	0.3	0.8	3.2
Dance	2.3	2.3	1.8	0.8	2.2
Additional Mathematics	2.0	1.7	3.1	1.8	2.7
Home Economics: Food	1.4	1.7	1.3	2.7	1.8
D&T Electronic Products	1.7	1.7	3.2	0.6	1.1
Art & Design (Photography)	1.7	1.6	0.6	1.2	2.9
Psychology	1.7	1.5	2.1	0.3	1.5
Social Science: Citizenship	1.7	1.5	.	0.4	1.3
Latin	0.6	0.2	5.9	11.4	0.0
Art & Design (Textiles)	1.2	1.2	1.0	1.4	1.8
General Studies	0.6	1.3	0.2	0.1	0.4
Expressive Arts & Performance Studies	1.1	1.1	0.8	0.3	1.6

Table 13: Uptake of individual subjects by attainment (% of students)

Subject	Low attainment	Medium attainment	High attainment
English Language	95.6	97.9	96.2
Mathematics	97.9	98.8	90.8
English Literature	48.2	82.4	93.0
Science (Core)	60.3	69.1	47.2
Additional Science	29.0	54.9	42.7
Religious Studies	20.8	34.3	42.6
History	17.5	31.8	47.9
Geography	15.3	26.9	38.3
French	8.0	21.5	41.3
Biology	2.6	16.0	48.6
Chemistry	2.2	15.5	48.1
Physics	2.2	15.5	47.7
Physical Education/Sports Studies	11.3	19.7	16.8
Art & Design	11.8	14.8	14.9
Drama & Theatre Studies	8.8	13.5	14.8
Statistics	3.8	10.5	16.1
Spanish	3.1	8.8	17.4
German	2.8	8.6	17.7
D&T Resistant Materials	11.4	10.0	7.5
D&T Food Technology	9.8	9.7	7.4
Business Studies:Single	5.6	10.6	10.6
Media/Film/Tv Studies	8.6	10.6	7.2
Art & Design (Fine Art)	6.3	8.3	10.4
D&T Graphic Products	6.3	8.0	7.4
Music	3.3	6.5	11.7
D&T Textiles Technology	4.2	6.1	6.4
Information & Communications Technology	2.6	5.3	8.0
D&T Product Design	5.2	5.7	4.8
Sociology	2.3	3.7	3.0
Office Technology	2.6	3.4	2.8
Home Economics: Child Development	4.1	3.3	1.3
Humanities: Single	2.7	2.6	1.8
Dance	1.7	2.5	2.2
Additional Mathematics	1.3	2.0	2.3
Home Economics: Food	1.8	1.8	1.5
D&T Electronic Products	1.3	1.7	1.9
Art & Design (Photography)	1.5	2.0	1.4
Psychology	0.8	1.7	1.8
Social Science: Citizenship	1.2	1.6	1.4
Latin	0.0	0.1	4.0
Art & Design (Textiles)	1.0	1.4	1.2
General Studies	1.2	1.1	0.9
Expressive Arts & Performance Studies	1.0	1.2	0.8

Table 14: Uptake of individual subjects by deprivation group (% of students)

Subject	Low deprivation	Medium deprivation	High deprivation
English Language	99.0	98.1	96.5
Mathematics	99.5	99.2	98.8
English Literature	84.9	75.3	64.4
Science (Core)	61.6	62.4	58.4
Additional Science	47.6	44.5	37.6
Religious Studies	34.8	31.2	32.3
History	38.7	32.3	23.9
Geography	32.6	26.2	18.6
French	29.5	21.3	15.3
Biology	29.2	20.7	13.3
Chemistry	28.9	20.3	12.9
Physics	28.9	20.3	12.9
Physical Education/Sports Studies	20.7	16.7	11.1
Art & Design	14.4	14.3	12.8
Drama & Theatre Studies	13.9	12.3	9.8
Statistics	12.3	10.8	9.0
Spanish	11.2	8.6	6.5
German	14.1	9.3	5.2
D&T Resistant Materials	10.1	10.1	8.4
D&T Food Technology	10.6	10.1	8.2
Business Studies:Single	11.9	9.0	6.5
Media/Film/Tv Studies	9.4	10.0	9.1
Art & Design (Fine Art)	9.1	8.2	6.4
D&T Graphic Products	8.6	7.9	6.8
Music	9.1	6.8	4.6
D&T Textiles Technology	6.8	5.8	5.1
Information & Communications Technology	6.3	4.8	3.4
D&T Product Design	5.5	5.6	5.3
Sociology	2.7	3.0	4.0
Office Technology	3.2	3.1	2.8
Home Economics: Child Development	2.7	3.4	3.2
Humanities: Single	2.4	2.6	2.7
Dance	2.8	2.4	1.6
Additional Mathematics	2.2	2.2	1.3
Home Economics: Food	1.7	1.7	1.4
D&T Electronic Products	2.1	1.8	1.3
Art & Design (Photography)	1.7	1.8	1.4
Psychology	1.6	1.6	1.4
Social Science: Citizenship	1.0	1.4	2.1
Latin	0.7	0.4	0.2
Art & Design (Textiles)	1.2	1.2	1.2
General Studies	1.2	1.2	0.9
Expressive Arts & Performance Studies	1.0	0.9	1.3

Table 15: Uptake of individual subjects by school gender (% of students)

Subject	Boys School	Girls School	Mixed School
English Language	93.0	97.2	96.5
Mathematics	83.6	90.1	96.9
English Literature	75.9	89.4	72.7
Science (Core)	43.4	55.5	59.9
Additional Science	33.9	44.2	42.3
Religious Studies	39.8	46.8	30.6
History	39.8	41.3	30.9
Geography	38.0	31.5	25.6
French	32.9	38.8	21.5
Biology	38.1	32.6	20.4
Chemistry	37.4	31.9	20.0
Physics	37.8	31.6	19.8
Physical Education/Sports Studies	15.9	9.4	16.4
Art & Design	8.6	15.4	13.9
Drama & Theatre Studies	9.4	17.8	12.0
Statistics	11.2	9.3	10.1
Spanish	14.3	19.3	8.6
German	13.9	13.9	9.0
D&T Resistant Materials	14.7	3.5	9.8
D&T Food Technology	2.4	8.4	9.4
Business Studies:Single	11.8	8.6	8.7
Media/Film/Tv Studies	5.7	6.0	9.2
Art & Design (Fine Art)	11.1	11.8	7.8
D&T Graphic Products	7.0	5.4	7.4
Music	8.7	9.4	6.8
D&T Textiles Technology	0.1	10.2	5.5
Information & Communications Technology	9.1	9.2	4.7
D&T Product Design	6.1	4.3	5.2
Sociology	0.5	4.7	3.0
Office Technology	0.9	2.8	3.1
Home Economics: Child Development	0.0	3.0	3.1
Humanities: Single	1.1	0.8	2.6
Dance	0.1	3.4	2.1
Additional Mathematics	2.4	1.0	1.9
Home Economics: Food	0.3	2.7	1.7
D&T Electronic Products	3.5	0.3	1.6
Art & Design (Photography)	1.6	1.3	1.6
Psychology	0.8	1.5	1.5
Social Science: Citizenship	1.0	1.5	1.4
Latin	6.7	5.3	0.7
Art & Design (Textiles)	0.1	2.1	1.2
General Studies	0.9	0.5	1.1
Expressive Arts & Performance Studies	0.1	0.7	1.1