

Uptake of GCSE subjects 2016

Statistics Report Series No. 114

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Introduction

This report looks at the uptake of GCSE (and IGCSE) subjects in England in 2016. The data for these analyses was 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 student characteristics such as age and gender. School census data, which is primarily available for students from state-maintained schools, provides information on student characteristics such as ethnicity and level of deprivation.

For analyses here, the Key Stage 4 (KS4) extract of the NPD was used, consisting of all students who were at the end of KS4 in 2016 (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. Only accredited IGCSEs were counted in this report, as non-accredited qualifications are no longer included in the NPD extract.

Table 1 presents a breakdown of the number of GCSEs taken. The most common number of GCSEs taken was 9 (24.4% of students). The mean number taken was 8.6.

Number of GCSEs	Percentage
1	0.7
2	0.7
3	1.3
4	2.2
5	3.3
6	5.3
7	9.7
8	16.6
9	24.4
10	22.7
11	10.2
12+	2.9
Mean no. taken	8.6
No. of students	574,130

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

School type

Students study for GCSEs at several different types of school. In previous reports in this series, five categories were used (Academy; Comprehensive; Grammar; Independent; Secondary Modern). Here, to better reflect true variability among schools, seven categories were used (Academy (Comprehensive); Academy (Modern); Academy (Selective); Comprehensive; Independent; Secondary Modern; Grammar). Further, previous reports broke down results by the school at which a student sat exams; here, the school at which a student was registered in the NPD, indicated by the school's Unique Reference Number

¹ New categories combine school type and selection policy, and are derived from Edubase, the Department for Education's register of educational establishments in England and Wales. For further information on derivation of categories, see Statistics Report No. 113 (Gill, 2017).

(URN), was used. 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	Percent
Academy (comprehensive)	305,539	53.2
Academy (modern)	12,906	2.2
Academy (selective)	19,339	3.4
Comprehensive	182,222	31.7
Grammar	3,192	0.6
Independent	44,787	7.8
Secondary Modern	6,145	1.1

Pupil attainment

Students were classified by their attainment at GCSE, based on their 'average points per entry' score in the NPD². This score was used to divide students into three approximately equally sized groups, reflecting low, medium and high attainment. Table 3 presents the number in each group, and the mean, minimum and maximum points scores for each group.

Table 3: GCSE students by attainment

Attainment group	Number of students	Minimum	Maximum	Mean
Low	193,230	0.0	4.6	3.4
Medium	187,073	4.6	5.8	5.2
High	193,821	5.8	9.5	6.7

Deprivation level

The level of deprivation that a student experiences was inferred using a Government index, based on home postcode. The Income Deprivation Affecting Children Index (IDACI) measures the proportion of children in a very small geographical area (Lower Layer Super Output Area or LSOA) living in low income families. It varies between 0 and 1 and indicates how income deprived the area is that they live in (although it cannot tell us how income deprived the student themself is).

Around 8.5% of students had no record for this measure in the NPD, so were excluded from this analysis. The remaining students were divided 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

Deprivation Group	Number of students	Minimum	Maximum	Mean
Low	175,092	0.00	0.10	0.06
Medium	175,103	0.10	0.27	0.17
High	175,094	0.27	0.99	0.43

 $^{^2}$ Average points per entry is derived by converting each qualification awarded at KS4 into points (e.g. for GCSEs A* = 8, A = 7, B = 6, etc.) and dividing the total by the number of qualifications for which a student was entered. Scores over 8 indicate that a student also achieved qualifications at a higher level than GCSE, such as AS levels or free standing maths.

School gender

School gender was determined by the school's female ratio (the number of females divided by the total number of students). If this was greater than 0.95, the school was designated a "Girls" school. If it was less than 0.05, the school was designated a "Boys" school. Remaining schools were considered to be "Mixed". Table 5 shows the numbers and percentages of students attending each type of school.

Table 5: GCSE students by school gender

School gender	Number of students	Percent
Boys' School	29,777	5.2
Girls' School	44,486	7.7
Mixed School	499,867	87.1

Number of GCSEs taken

The number of GCSEs taken by students in each of the different classifications described above is presented in Tables 6-9. For example, Table 6 shows that 22.8% of students in comprehensive academies took 10 GCSEs, compared with 54.5% of students in grammar schools. Table 6 also indicates that in independent schools, 8.3% of students took 10 GCSEs, with 4-9 GCSEs more common: this reflects higher uptake of non-accredited IGCSEs in these schools. Table 7 shows that 10.1% of students in the low attainment group took 10 GCSEs, compared with 32.8% of students in the high attainment group. Table 8 shows that 29.6% of students in the low deprivation group took 10 GCSEs, compared with 19.0% of students in the high deprivation group. Table 9 shows that at girls' schools, 27.3% of students took 10 GCSEs, compared with 23.4% at boys' schools and 22.3% at mixed schools.

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

Number of GCSEs	Academy (comp)	Academy (mod)	Academy (sel)	Comp.	Grammar	Ind.	Sec. Mod.
1	0.6	0.6	0.1	0.6	0.1	2.5	0.8
2	0.5	0.7	0.1	0.5	0.1	3.3	0.4
3	0.8	1.0	0.0	0.7	0.1	7.6	0.7
4	1.4	1.4	0.0	1.3	0.0	13.4	1.6
5	2.5	2.1	0.1	2.4	0.1	13.9	3.0
6	5.1	3.9	0.2	4.5	0.2	12.3	6.1
7	10.0	11.1	1.0	9.4	3.0	12.8	13.2
8	17.7	21.3	2.8	17.4	3.1	11.6	21.2
9	25.6	27.4	10.9	26.9	14.3	11.1	24.2
10	22.8	21.0	35.8	24.4	54.5	8.3	19.2
11	10.0	7.2	36.2	9.6	19.6	2.6	8.4
12+	3.0	2.3	12.8	2.2	4.9	0.6	1.1
Mean no. taken	8.7	8.6	10.4	8.7	10.0	6.3	8.4
No. of students	305,539	12,906	19,339	182,222	3,192	44,787	6,145

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

Number of GCSEs	Low	Medium	High
1	1.3	0.2	0.7
2	1.4	0.2	0.6
3	2.0	0.4	1.4
4	3.5	0.7	2.5
5	6.0	1.1	2.6
6	10.8	2.6	2.4
7	17.7	8.1	3.3
8	23.5	19.1	7.4
9	21.2	31.7	20.5
10	10.1	25.3	32.8
11	2.2	8.6	19.6
12+	0.3	1.9	6.3
Mean no. taken	7.5	8.9	9.3
No. of students	193,230	187,073	193,821

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

Number of GCSEs	Low	Medium	High
1	0.2	0.3	0.5
2	0.2	0.4	0.6
3	0.3	0.6	1.1
4	0.6	1.2	1.9
5	1.3	2.2	3.6
6	2.8	4.7	6.6
7	6.4	9.8	12.4
8	13.9	17.7	19.9
9	26.5	25.9	24.5
10	29.6	23.6	19.0
11	14.5	10.5	7.6
12+	3.8	3.1	2.4
Mean no. taken	9.2	8.8	8.4
No. of students	175,092	175,103	175,094

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

Number of GCSEs	Boys school	Girls school	Mixed school
1	0.6	0.6	0.8
2	1.2	0.8	0.7
3	2.4	1.9	1.2
4	4.6	2.9	2.0
5	5.0	4.0	3.1
6	5.3	5.4	5.3
7	8.1	7.0	10.1
8	10.7	10.3	17.6
9	17.1	20.1	25.2
10	23.4	27.3	22.3
11	16.5	15.3	9.3
12+	4.9	4.4	2.6
Mean no. taken	8.6	8.8	8.6
No. of students	29,777	44,486	499,867

Uptake of individual GCSE subjects

In the following tables, uptake of individual subjects is presented, broken down into the classifications described above. Subjects with overall uptake of less than 1% are not included. In each table, subjects are ordered by overall uptake (highest first). Thus, mathematics had the highest level of uptake, being taken by 93.4% of all GCSE students, 93.0% of males and 93.7% of females.

It is expected that nearly all pupils take some core subjects, such as English, mathematics and science. However, there are alternatives to GCSEs in these subjects, such as (unaccredited) IGCSEs, BTECs and Cambridge Nationals, that are not included in these tables, so the percentages for these subjects are reduced somewhat. For a detailed analysis of uptake of alternative qualifications in English schools see Gill (2016).

Table 10: Uptake of individual subjects by gender (% of students)

Subject	Boys	Girls	All
Mathematics	93.0	93.7	93.4
English Literature	90.2	92.9	91.5
English Language	88.0	91.1	89.6
Science (Core)	66.7	68.1	67.4
Additional Science	59.3	61.8	60.5
Religious Studies	42.6	50.5	46.5
History	42.4	46.1	44.2
Geography	43.2	38.7	41.0
French	21.3	29.4	25.3
Biology	25.3	25.1	25.2
Chemistry	25.0	24.6	24.8
Physics	25.0	24.4	24.7
Physical Education/Sports Studies	25.6	13.7	19.7
Spanish	14.0	18.6	16.2
Art & Design	8.4	19.1	13.7
Information & Communications Technology	15.3	10.7	13.0
Business Studies: Single	15.0	10.7	12.9
Drama & Theatre Studies	9.0	14.7	11.9
Computer Studies/Computing	17.1	4.5	10.9
German	8.7	9.4	9.1
Art & Design (Fine Art)	5.6	11.8	8.7
Statistics	8.8	8.0	8.4
D&T Resistant Materials	13.7	2.5	8.1
Media/Film/TV Studies	8.3	8.0	8.1
Music	6.6	8.1	7.3
D&T Product Design	9.3	3.5	6.5
D&T Food Technology	4.1	7.5	5.8
English Language & Literature	6.4	4.2	5.3
D&T Graphic Products	5.5	3.4	4.5
Art & Design (Photography)	2.8	4.7	3.8
D&T Textiles Technology	0.3	7.3	3.8
Sociology	2.0	5.3	3.6
Social Science: Citizenship	2.8	3.5	3.2
Further additional science	3.0	3.0	3.0
Home Economics: Child Development	0.1	5.6	2.8
Psychology	1.6	3.6	2.6
Dance	0.2	3.5	1.8
Office Technology	1.9	1.7	1.8
Economics	2.2	1.1	1.6
Methods in Mathematics	1.6	1.3	1.5
Applications of Mathematics	1.6	1.3	1.5
Health & Social Care	0.2	2.6	1.4
Latin	1.4	1.4	1.4
Home Economics: Food	0.9	1.7	1.3
General Studies	1.3	1.3	1.3
Applied Engineering	2.1	0.2	1.2
Art & Design (Textiles)	0.1	2.3	1.2
D&T Electronic Products	2.1	0.2	1.1
Art & Design (Graphics)	1.3	0.9	1.1

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

Subject	Acad. (comp)	Acad. (mod)	Acad. (sel)	Comp.	Gram.	Ind.	Sec. Mod.
Mathematics	97.4	97.6	94.3	98.0	99.8	44.0	99.0
English Literature	93.1	93.8	98.7	93.5	99.7	68.3	91.9
English Language	93.2	93.9	98.9	93.8	99.8	41.4	92.2
Science (Core)	73.1	80.7	15.4	73.7	23.3	23.5	79.6
Additional Science	65.6	71.7	15.3	66.6	23.2	19.3	68.6
Religious Studies	43.5	43.7	55.4	53.4	50.7	35.2	48.1
History	44.1	40.7	56.7	44.0	56.1	41.4	36.8
Geography	40.3	41.1	54.0	39.6	55.0	44.9	38.5
French	24.0	22.6	41.9	24.3	39.4	32.3	18.5
Biology	23.1	15.2	82.5	21.8	71.3	29.4	16.7
Chemistry	22.9	15.1	82.1	21.6	71.3	26.4	16.6
Physics	22.9	15.1	82.2	21.5	71.3	26.2	16.6
Physical Education/Sports Studies	20.7	18.0	19.9	20.0	15.7	12.8	17.4
Spanish	15.3	14.1	31.1	14.8	26.8	22.5	13.9
Art & Design	14.1	13.2	9.3	14.2	9.2	11.2	16.3
Information & Communications Technology	13.2	10.4	13.3	14.1	13.0	7.3	15.8
Business Studies: Single	13.9	11.0	17.2	12.3	19.1	7.2	8.7
Drama & Theatre Studies	11.4	12.8	14.1	11.6	11.1	15.2	9.2
Computer Studies/Computing	11.6	8.5	15.6	10.6	11.9	5.3	12.2
German	8.6	2.9	29.0	7.7	29.6	10.2	1.8
Art & Design (Fine Art)	8.2	7.9	11.3	8.3	14.7	12.2	6.1
Statistics	8.7	20.7	6.9	8.0	3.0	2.9	25.6
D&T Resistant Materials	7.8	8.0	6.3	8.5	5.7	10.0	9.2
Media/Film/TV Studies	9.2	11.0	2.0	8.5	4.4	1.3	6.9
Music	6.9	5.5	11.2	7.0	12.6	10.4	4.6
D&T Product Design	6.9	5.3	7.6	6.2	10.6	4.0	5.0
D&T Food Technology	6.0	7.3	7.2	6.2	4.1	1.7	6.6
English Language & Literature	5.8	4.6	1.6	5.2	0.0	4.1	6.3
D&T Graphic Products	4.6	4.6	4.8	5.0	3.9	1.3	3.8
Art & Design (Photography)	4.0	5.7	0.8	4.2	0.2	1.5	4.5
D&T Textiles Technology	3.9	2.9	4.2	3.9	4.7	1.7	3.3
Sociology	3.9	4.4	1.1	4.3	0.0	0.3	3.4
Social Science: Citizenship	3.4	3.1	0.4	3.7	0.0	1.1	3.3
Further additional science	3.0	3.4	0.7	3.5	0.8	1.2	4.4
Home Economics: Child Development	3.2	4.4	0.1	3.1	0.0	0.2	2.3
Psychology	2.6	4.3	2.5	2.7	1.7	0.9	6.0
Dance	2.0	3.3	1.5	1.7	0.6	0.7	1.5
Office Technology	1.8	2.5	0.8	1.8	1.3	1.5	2.6
Economics	1.5	0.9	7.6	1.3	1.8	2.3	0.0
Methods in Mathematics	1.6	1.4	5.6	1.0	0.0	0.9	0.0
Applications of Mathematics	1.6	1.4	5.6	1.0	0.0	0.9	0.0
Health & Social Care	1.6	1.5	0.2	1.5	0.8	0.0	3.2
Latin	0.3	0.0	5.8	0.1	6.6	12.4	0.0
Home Economics: Food	1.2		1.1	1.2		2.5	
		1.5			3.0		1.3
General Studies	1.5	1.7	1.0	1.4	0.0	0.0	0.4
Applied Engineering	1.3	0.7	0.9	1.4	1.5	0.1	0.0
Art & Design (Textiles)	1.2	2.1	0.6	1.0	0.7	1.2	1.3
D&T Electronic Products	1.2	1.1	2.7	1.0	3.4	0.6	0.5
Art & Design (Graphics)	1.2	2.3	0.7	1.1	0.1	0.6	0.3

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

Subject	Low	Medium	High
Mathematics	96.2	96.8	87.2
English Literature	86.2	94.4	94.2
English Language	86.6	93.9	88.4
Science (Core)	86.2	77.0	39.4
Additional Science	69.5	73.8	38.8
Religious Studies	37.4	48.3	53.8
History	32.6	45.9	54.1
Geography	32.2	42.7	48.1
French	10.6	25.7	39.6
Biology	4.3	19.8	51.1
Chemistry	4.0	19.6	50.6
Physics	4.0	19.5	50.4
Physical Education/Sports Studies	18.8	23.1	17.4
Spanish	7.3	16.6	24.9
Art & Design	14.2	14.0	12.8
Information & Communications Technology	12.9	14.8	11.4
Business Studies: Single	10.5	15.5	12.8
Drama & Theatre Studies	10.0	12.6	13.0
Computer Studies/Computing	8.0	11.6	13.1
German	3.0	8.6	15.6
Art & Design (Fine Art)	7.9	8.6	9.5
Statistics	6.3	9.0	9.9
D&T Resistant Materials	10.8	8.0	5.6
Media/Film/TV Studies	9.3	9.6	5.6
Music	4.4	6.7	10.8
D&T Product Design	7.6	6.7	5.0
D&T Food Technology	7.4	5.8	4.1
English Language & Literature	10.5	4.1	1.3
D&T Graphic Products	4.4	5.0	4.1
Art & Design (Photography)	4.8	4.3	2.3
D&T Textiles Technology	3.4	4.1	3.8
Sociology	3.1	4.3	3.5
Social Science: Citizenship	3.6	3.5	2.4
Further additional science	0.5	2.5	5.8
Home Economics: Child Development	4.4	3.0	1.1
Psychology	1.6	3.1	3.1
Dance	1.6	2.1	1.8
Office Technology	1.8	2.1	1.5
Economics	0.6	1.5	2.9
Methods in Mathematics	1.2	1.4	1.9
Applications of Mathematics	1.2	1.3	1.9
Health & Social Care	2.0	1.6	0.7
Latin	0.0	0.2	3.9
Home Economics: Food	1.5	1.4	1.0
General Studies	1.6	1.3	1.0
Applied Engineering	1.5	1.3	0.8
Art & Design (Textiles)	1.2	1.3	1.0
D&T Electronic Products	1.0	1.2	1.2
Art & Design (Graphics)	1.1	1.3	0.9

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

Subject	Low	Medium	High
Mathematics	97.8	97.5	98.2
English Literature	95.5	93.9	92.3
English Language	95.6	94.1	92.4
Science (Core)	64.5	71.9	77.5
Additional Science	60.4	65.5	67.0
Religious Studies	48.9	46.3	47.9
History	48.2	44.8	41.0
Geography	45.5	40.9	36.2
French	29.2	24.2	21.2
Biology	33.4	24.6	16.9
Chemistry	33.3	24.5	16.7
Physics	33.3	24.4	16.6
Physical Education/Sports Studies	24.1	20.5	16.6
Spanish	17.3	14.9	15.1
Art & Design	12.9	14.2	14.7
Information & Communications Technology	13.0	13.3	14.3
Business Studies: Single	15.9	13.4	11.1
Drama & Theatre Studies	12.8	11.7	10.4
Computer Studies/Computing	12.1	11.6	10.5
German	13.0	8.9	5.0
Art & Design (Fine Art)	8.8	8.6	7.9
Statistics	8.3	9.1	9.3
D&T Resistant Materials	8.2	8.5	7.4
Media/Film/TV Studies	8.5	9.2	8.6
Music	8.6	7.0	5.7
D&T Product Design	6.6	6.8	6.7
D&T Food Technology	6.7	6.4	5.4
English Language & Literature	4.2	5.4	6.6
D&T Graphic Products	5.5	4.9	3.9
Art & Design (Photography)	3.7	4.3	4.0
D&T Textiles Technology	4.3	4.0	3.6
Sociology	3.1	3.6	5.1
Social Science: Citizenship	2.5	3.2	4.4
Further additional science	3.2	3.0	3.1
Home Economics: Child Development	2.6	3.3	3.4
Psychology	2.8	2.7	2.7
Dance	2.3	2.0	1.5
Office Technology	1.7	1.8	1.9
Economics	1.9	1.4	1.5
Methods in Mathematics	2.0	1.9	0.7
Applications of Mathematics	2.0	1.9	0.7
Health & Social Care	1.0	1.4	2.2
Latin	0.7	0.4	0.2
Home Economics: Food	1.3	1.3	1.0
General Studies	1.5	1.5	1.2
Applied Engineering	1.4	1.4	1.1
Art & Design (Textiles)	1.1	1.1	1.2
D&T Electronic Products	1.5	1.1	0.9
Art & Design (Graphics)	1.3	1.2	1.2

Table 14: Uptake of individual subjects by school gender (% of students)

Subject	Boys' School	Girls' School	Mixed School
Mathematics	79.8	85.8	94.8
English Literature	88.9	90.8	91.8
English Language	79.6	85.3	90.6
Science (Core)	41.1	50.8	70.5
Additional Science	36.3	45.3	63.3
Religious Studies	51.5	63.6	44.7
History	48.6	47.8	43.6
Geography	47.9	41.8	40.5
French	33.0	34.3	24.1
Biology	41.4	36.9	23.2
Chemistry	40.5	35.7	22.9
Physics	40.6	35.4	22.9
Physical Education/Sports Studies	18.3	10.7	20.6
Spanish	20.4	25.7	15.2
Art & Design	6.9	13.4	14.1
Information & Communications Technology	11.6	11.2	13.3
Business Studies: Single	15.0	9.1	13.1
Drama & Theatre Studies	8.9	16.7	11.6
Computer Studies/Computing	13.5	6.9	11.1
German	14.0	12.3	8.5
Art & Design (Fine Art)	10.4	11.4	8.3
Statistics	8.9	6.0	8.6
D&T Resistant Materials	11.8	2.0	8.5
Media/Film/TV Studies	5.2	4.9	8.6
Music	8.8	9.7	7.0
D&T Product Design	8.3	4.7	6.5
D&T Food Technology	2.1	5.8	6.0
English Language & Literature	5.3	3.3	5.5
D&T Graphic Products	4.0	2.7	4.7
Art & Design (Photography)	1.9	2.7	4.0
D&T Textiles Technology	0.0	6.6	3.7
Sociology	0.0	5.3	3.7
Social Science: Citizenship	2.0	5.3	3.0
Further additional science	2.3	2.9	3.0
Home Economics: Child Development	0.0	3.0	3.0
Psychology	1.3	2.5	2.7
Dance	0.2	2.6	1.9
Office Technology	1.0	2.4	1.8
Economics	5.9	1.4	1.4
Methods in Mathematics	3.5	1.4	1.4
Applications of Mathematics	3.5	1.1	1.4
Health & Social Care			
Latin	0.0 7.3	1.9	1.4
		5.4	0.7
Home Economics: Food	0.4	1.9	1.3
General Studies	0.6	0.4	1.4
Applied Engineering	1.3	0.3	1.3
Art & Design (Textiles)	0.0	2.0	1.2
D&T Electronic Products	2.9	0.0	1.1
Art & Design (Graphics)	1.3	0.6	1.2

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