

Detailed analysis of summer 2016 GCSE results



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Key points

- Outcomes for 16-year-old students at grades A*-C for English, English literature and mathematics have remained stable between summer 2015 and summer 2016 when combined across GCSE and level 1/2 certificate qualifications (also known as international GCSEs).
- Entries for 16-year-old students increased in the majority of other EBacc subjects in summer 2016. On average, schools tended to enter more 16-year-old students for EBacc subjects in summer 2016 compared to summer 2015.
- In general, results for 16-year-old students in the majority of EBacc subjects tended to be lower in summer 2016 than in summer 2015. This appears to be due to an influx of less able students taking EBacc subjects in summer 2016.

Summary

The following analyses provide an overview of the entries and results in a number of EBacc subjects for GCSEs taken in summer 2016 compared to summer 2015. The analyses focus on the outcomes for 16-year-old students in each year. The figures presented are taken from the Joint Council for Qualifications (JCQ) provisional results statistics, with the exception of those that include international GCSEs. These figures are calculated based on data that is supplied to us by the awarding organisations each year. The entry figures for summer 2016 are presented in the context of a declining population of students aged 16 this year.

English/English language (combined under the heading English in JCQ data)

The overall entry for GCSE English/English language has decreased slightly from 521,000 in summer 2015 to 513,000 in summer 2016. Although the post-16 entry for GCSE English/English language has increased from 97,000 in summer 2015 to 128,000 in summer 2016, there has been a continued shift towards level 1/2 certificates (also known as international GCSEs) in English language for 16-year-old students.

Overall the proportion of students awarded A*-C in GCSE English/English language has decreased from 65.4% in summer 2015 to 60.2% in summer 2016. Some of this decrease is due to more post-16 students taking GCSE English/English language in summer 2016. In general, post-16 students perform less well than 16-year-old students. This is illustrated in the table below, which shows that post-16 students did less well at all grades in 2015 and 2016. The table also shows that post-16 students performed less well in summer 2016 compared to post-16 students in summer 2015. This suggests that the additional post-16 students this year tended to be less able students.

	Cumulative percentage at grade			
	2015		2016	
	16-year-olds	Post-16	16-year-olds	Post-16
A*	3.7	0.5	4.3	0.3
A	17.4	2.7	17.7	1.8
C	72.6	35.1	71.3	26.9

The 16-year-old entry for GCSE English/English language has decreased from 414,000 in summer 2015 to 383,000 in summer 2016. This is likely to be due to the continued shift towards international GCSEs in English language.

We know that schools and colleges tend to use more than one exam board for English and that some of the churn in entries between English, English language and international GCSEs in English is from schools altering the mix of their entries in the different qualifications. This can mean that overall GCSE results look different, even though an individual school's results may be stable from one year to the next.

To look at this, we have combined the data from JCQ (including international GCSEs) with data from CIE's IGCSE in First Language English. The following table shows the cumulative percentage outcomes for 16-year-old students in summer 2015 and summer 2016 for all GCSE English/English language and international GCSEs in English language combined. This shows that overall results for 16-year-old students in English/English language have remained stable in summer 2016 compared to summer 2015, particularly at grade C.

	Cumulative percentage at grade	
	2015	2016
A*	3.4	3.9
A	15.8	16.3
C	69.8	69.7

We have published separately [our analysis of school/college variation in year-on-year results for all GCSE English/English language and international GCSEs in English language combined](#). This shows that the average variation in schools' results between 2015 and 2016 is close to zero and that most schools saw little variation in their year-on-year results.

English literature

The overall entry for GCSE English literature has decreased from 437,000 in summer 2015 to 414,000 in summer 2016. This decrease is largely due to a decrease in students aged 15 and under entering the subject early. The entries for students aged 15 and under were 41,000 in 2015 and 8,000 in 2016. The drop in early entry for GCSE English literature is likely due to students waiting to enter the reformed GCSE English literature specifications in summer 2017. The overall outcomes for GCSE English literature have remained stable since summer 2015. The outcomes at grades A*-C were 75.6% in summer 2015 and 75.1% in summer 2016.

The entry for 16-year-old students for GCSE English literature has increased slightly from 391,000 in summer 2015 to 401,000 in summer 2016. The entry for international GCSEs in GCSE English literature for 16-year-old students has also increased in summer 2016. Whilst there has been a slight decrease in outcomes for 16-year-old students taking GCSE English literature in summer 2016, when GCSE and international GCSEs in English literature outcomes are combined, the outcomes are stable. This is illustrated in the following table.

	Cumulative percentage at grade	
	2015	2016
A*	6.2	6.3
A	22.7	22.0
C	73.8	73.2

Mathematics

The overall entry for GCSE mathematics has decreased slightly from 761,000 in summer 2015 to 757,000 in summer 2016. Although the post-16 entry for GCSE mathematics has increased from 131,000 in summer 2015 to 174,000 in summer 2016, the entry for students aged 15 and under and students aged 16 has decreased.

Overall results in GCSE mathematics have decreased from 63.3% in summer 2015 to 61.0% in summer 2016. This appears to be due to more post-16 students taking GCSE mathematics in summer 2016, who tend to perform less well than 16-year-old students. This is illustrated in the table below, which shows that post-16 students performed less well compared to 16-year-old students in each year. It also shows that, in general, post-16 students performed less well in summer 2016 compared to post-16 students in summer 2015. This suggests that the additional post-16 students in summer 2016 are less able students compared to summer 2015.

	Cumulative percentage at grade			
	2015		2016	
	16-year-olds	Post-16	16-year-olds	Post-16
A*	6.7	1.0	7.0	0.8
A	18.6	3.1	19.7	2.4
C	69.1	35.8	70.5	29.5

The 16-year-old entry for GCSE mathematics has decreased from 597,000 in summer 2015 to 570,000 in summer 2016. This appears to be due to a small shift in entries to international GCSEs in mathematics, where the 16-year-old entry has increased in summer 2016.

The following table shows the cumulative percentage outcomes for 16-year-old students in summer 2015 and summer 2016 for GCSE mathematics and international GCSEs in mathematics combined. It shows that overall results for 16-year-old students in mathematics have remained relatively stable in summer 2016 compared to summer 2015.

	Cumulative percentage at grade	
	2015	2016
A*	6.6	7.0
A	18.4	19.5
C	68.4	69.1

We have published separately our [analysis of school/college variation in year-on-year results for all GCSE mathematics and international GCSEs in mathematics combined](#). This shows that the average variation in schools' results between 2015 and 2016 is close to zero and that most schools saw little variation in their year-on-year results.

Other EBacc subjects

The following table shows the cumulative percentage of students at A*, A and C for 16-year-old students sitting GCSEs in other EBacc subjects in summer 2015 and summer 2016. In general, the performance of 16-year-old students at grades A*-C in summer 2016 is lower than the performance of 16-year-old students in summer 2015.

Subject	Grades A*-A		Grades A*-C	
	2015	2016	2015	2016
Additional Science	10.5	9.1	62.9	59.4
Biology	43.2	42.4	92.3	91.5
Chemistry	43.6	42.4	91.6	90.5
French	23.4	22.7	70.3	69.2
Geography	27.1	24.7	69.3	66.3
German	22.3	21.9	74.2	73.5
History	28.8	26.5	69.1	66.0
Physics	43.4	42.0	92.3	91.1
Science	4.5	4.3	50.1	47.9
Spanish	27.8	25.9	72.5	69.9

The change in outcomes in summer 2016 for 16-year-old students is likely to be associated with changes to the entry profile of 16-year-old students in each subject. For the majority of EBacc subjects, the entries from 16-year-old students increased in summer 2016 compared to summer 2015. Anecdotally, the increase in GCSE entries for EBacc subjects is due to students entering more GCSE qualifications than equivalent qualifications in summer 2016. The entry to some non-EBacc subjects – for example media/film/tv, music, and performing/expressive arts – have also decreased in summer 2016.

The following table shows the average number of 16-year-old students per school taking each EBacc subject in summer 2016 compared to summer 2015. This shows that, on average, schools tended to enter more 16-year-olds in summer 2016 than in summer 2015. Of exception to this was GCSE French and German, where the average entries per centre decreased slightly.

The greatest increase in the average number of students per schools is for additional science, geography, history and science. These subjects also tended to show the greatest change in A*-C outcomes for 16-year-old students in summer 2016 compared to summer 2015.

Subject	Average number of students per school		
	2015	2016	Change (2016-2015)
Additional science	80.5	91.6	11.1
Biology	46.0	46.2	0.2
Chemistry	47.0	47.5	0.5
French	40.4	38.2	-2.2
Geography	53.7	57.9	4.2
German	28.8	27.7	-1.1
History	58.7	62.4	3.7
Physics	46.9	47.2	0.3
Science	48.1	58.3	10.2
Spanish	31.2	31.9	0.7

The increase in entry and decrease in outcomes for 16-year-old students in summer 2016 suggests that there are more less able students in summer 2016. To consider this, the following table shows the predicted A*-C outcomes for 16-year-old students in summer 2015 compared to summer 2016.¹ Predicted outcomes are based on the

¹ Predicted outcomes are based on Key Stage 2 data, not including independent and selective schools. They are based on data supplied by the awarding bodies as of 12th August

relationship between prior attainment (Key Stage 2 for GCSE predictions) and national results in a reference year and are used by awarding bodies to guide their awarding decisions. If the prior attainment of the cohort increases relative to the reference series, then the predicted outcomes will also increase. Conversely, if the prior attainment of the cohort decreases then the predicted outcomes will also decrease.

The following table shows that for each subject the predicted outcomes at grade C and above were lower in summer 2016 when compared to summer 2015. This shows that the prior attainment of the 16-year-old students sitting each subject in summer 2016 was lower than in summer 2015. The increase in entry in summer 2016 for 16-year-old students therefore appears to be due to an increase in less able students entering EBacc subjects. This has resulted in a decrease in outcomes for 16-year-old students in summer 2016.

Subject	Predicted outcomes, grades A*-C, %		
	2015	2016	Change (2016-2015), %
Additional science	63.7	59.3	-4.4
Biology	91.7	90.4	-1.3
Chemistry	90.8	89.7	-1.1
French	67.8	66.1	-1.7
Geography	66.7	62.5	-4.2
German	72.7	71.3	-1.4
History	67.8	64.3	-3.5
Physics	91.5	90.4	-1.1
Science	50.1	48.2	-1.9
Spanish	68.4	66.6	-1.8

2015 and 17th August 2016. Whilst the data is not complete at this stage any missing data is likely to be missing at random. The figures presented here are therefore not precise but provide an indication of the likely predicted outcomes.

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