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# The impact of the introduction of Progress 8 on the uptake of qualifications in English schools – an update for 2017/18 to 2019/20

Research Report

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# Contents

# Introduction

This report is an updated version of analyses undertaken in previous years (Gill and Crawford, 2016; Gill, 2017; Gill, 2018) looking at the impact of the introduction of new accountability measures (Progress 8) on the qualifications and subjects taken by students at the end of Key Stage 4 (KS4). The previous reports covered the period from 2007/08 to 2016/17. For this report we add in data for the three years from 2017/18 to 2019/20.

## The new measures – Progress 8

In October 2013, the Department for Education announced that, from 2015/16 all state-maintained and academy schools would be subject to new accountability measures (known as Progress 8). These new measures replaced the previous headline measure (the proportion of students achieving 5 grades A* to C at GCSE including English and maths).

To calculate Progress 8 for a school it is first necessary to calculate the Attainment 8 measure for each student in the school. This is based on achievement in their best 8 qualifications, across the following three elements:

1. EBacc[1] qualifications in maths and English
2. Three other EBacc subjects, from a choice of science subjects, computer science, history, geography or languages[2]
3. Three 'other' qualifications, which can either be other EBacc qualifications, non-EBacc GCSEs or vocational qualifications from a DfE approved list[3].

Attainment 8 is the total points score from all qualifications taken that meet these criteria (up to a maximum of 8 qualifications). Maths and English are double weighted in the calculation (although for English this is only the case if the student takes both English language and English literature, with the best grade double weighted). It is possible to take more than three EBacc subjects, with any above three being included in the 'other' element (if they are in the best 8 grades). The points score for each qualification is based on the grade achieved in that qualification[4].

Progress 8 is calculated at student level by comparing achievement on the Attainment 8 measure with the average Attainment 8 score for students with the same prior attainment (as

[1] The EBacc (English Baccalaureate) is an accountability measure for schools, based on the proportion of their students who enter for GCSEs in a core set of subjects: English language and literature, maths, sciences, history or geography, and a language. See https://www.gov.uk/government/publications/english-baccalaureate-ebacc/english-baccalaureate-ebacc for details

[2] For a full list of EBacc subjects and qualifications see https://www.gov.uk/government/publications/english-baccalaureate-eligible-qualifications

[3] See https://www.gov.uk/government/collections/performance-tables-technical-and-vocational-qualifications

[4] For more information on points scores, see https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/872997/Secondary_accountability_measures_guidance_February_2020_3.pdf

measured by the average Key Stage 2 (KS2) fine level for reading and maths[5]). For example, if the mean Attainment 8 score for students with an average KS2 fine level of 5.1 was 59.3 points, then a student with a score of 67 would have a Progress 8 score of (67-59.3)/10 = 0.77. The total points score is divided by 10 to reflect the fact that maths and English scores are double weighted[6]. A score of 0.77 means that the student achieved an average of three quarters of a grade better per subject than students with the same prior attainment. A school's Progress 8 score is just the average of their students' Progress 8 scores.

Between 2016 and 2018 the Progress 8 measure included a 'floor' standard, which was the minimum standard that schools should meet. A school with a Progress 8 measure of below -0.5 (and with the upper bound of the 95% confidence interval below 0) was deemed to be below the floor standard and was potentially subject to further scrutiny from Ofsted. However, from 2019 onwards, the floor standard no longer applies.

## Other changes to accountability measures

The focus of this report is on changes to the uptake of qualifications and subjects since the introduction of Progress 8. However, to provide some context and to give an indication of long term trends, results will be presented for all years from 2007/08 to 2019/20. This time period includes some other important changes to accountability measures, such as the introduction of the English Baccalaureate (EBacc) performance measure in 2010 and the change to eligibility for performance tables of qualifications following the publication of the Wolf review of vocational education (Wolf, 2011). These are explained in more detail in the first report in this series (Gill and Crawford, 2016).

## Findings from previous reports

The findings from the previous reports in this series (Gill and Crawford, 2016; Gill, 2017; Gill, 2018) suggested that schools changed their behaviour following the introduction of Progress 8. In particular, the results showed an increase in the average number of EBacc qualifications and a decrease in the average number of non-eligible qualifications taken by students between 2014/15 (before Progress 8 for most schools) and 2016/17. There was also a steady increase in the proportion of students who filled all their Progress 8 slots in that time period.

In terms of individual GCSE subjects, core science, additional science, computer sciences, history, and geography all had a boost to uptake levels following the introduction of Progress 8.

There was also evidence that schools with lower Progress 8 scores in their first year had, on average, larger increases in uptake of EBacc qualifications. These schools also increased uptake of VRQs more than other schools, particularly in the European Computer Driving

[5] Fine levels are determined by averaging the raw marks achieved in each test and then applying level thresholds to these marks. There are 34 prior attainment categories which vary between 1.5 and 5.8

[6] No matter how many eligible qualifications are taken the total score is always divided by 10, so it pays for students to fill as many slots as possible.

Licence (ECDL) qualification, a controversial qualification which some schools were apparently teaching to students in just a few days (Schools week, 2015).

In this report, we present results from 2007/08 to 2019/20, with a focus on the trends in the last 3 years (i.e., the years not covered by previous reports).

# Data and Method

The data used in the analysis was taken from the National Pupil Database (NPD) from each year between 2007/08 and 2019/2020. The NPD is held by the Department for Education and consists of examination results for all students in all qualifications and subjects in schools and colleges in England. For state-maintained schools and academies, the NPD also holds student and school background characteristics such as age, gender, ethnicity and level of income-related deprivation (collected as part of the school census). Only qualifications that were eligible for performance tables were included in the analysis. Any re-sits in the same subject and qualification were excluded, as we were interested in changes to uptake (and provision) of qualifications and not how many times a qualification was taken. Data from independent schools, FE colleges, sixth form colleges and special schools was excluded, as these schools were not subject to the same accountability measures (at the end of Key Stage 4) as state-maintained schools and therefore had less incentive to alter their behaviour following changes to league tables.

In the analysis, uptake of a qualification (or subject) was defined as whether a student who was at the end of KS4 in a particular year had taken the qualification at some point. Therefore, qualifications taken in previous years were counted. For example, if a student who was at the end of KS4 in 2017/18 took a GCSE in English Language in year 10 (i.e., academic year 2016/17) then this counts as uptake in the 2017/18 data, rather than the 2016/17 data.

The provision of a qualification in a particular year was defined as the proportion of centres where at least one student who was at the end of KS4 in that year took the subject in question at some point.

As well as an overall analysis of changes to uptake and provision, this research also investigated changes in different groups of schools. For this analysis we classified schools by school type, by average attainment, by deprivation, and by ethnic composition.

## School type

Schools were classified using the Department for Education's register of educational establishments[7] into three main categories: comprehensive, secondary selective (grammar) and secondary modern. Schools which converted to an Academy (either before or during the period investigated) were included in their original categorisation because it is a reasonable assumption that these retain their original admissions policies after conversion (e.g., Academies that were originally grammar schools still have a selective admissions policy).

[7] https://get-information-schools.service.gov.uk/

Table 1 displays the number of schools (and students attending them) in each of the main three school types in 2017/18. The proportion of each school type was similar in the other years (2018/19 and 2019/20).

Table 1: Numbers of schools and students in each school type (all schools, 2017/18)

| School type | No. of schools | % of schools | No. of students | % of students |
|---|---|---|---|---|
| Comprehensive | 2,854 | 91.1 | 463,977 | 92.1 |
| Secondary Selective | 163 | 5.2 | 23,230 | 4.6 |
| Secondary Modern | 116 | 3.7 | 16,830 | 3.3 |

Thus, over 90% of the schools included were comprehensives and this accounted for 92.1% of students.

## School attainment level

The average attainment of students within a school can be an important factor when decisions are made about which qualifications to offer. A school level attainment variable was created by calculating the school mean of the students' KS4 average points scores (in each year). This was then used to classify schools (within each year) into one of three equally sized groups ('Low', 'Medium' or 'High').

Table 2 displays the number of schools, the number of students and the mean of the school average KS4 points score in each attainment group for the 2017/18 academic year. The equivalent figures in 2018/19 were very similar. However, in 2019/20 the means in each group were significantly higher because of the use of teacher assessed grades instead of exams.

Table 2: School attainment ranks (2017/18)

| School attainment | No. of schools | No. of students | Mean |
|---|---|---|---|
| Low | 1,044 | 143,037 | 3.68 |
| Medium | 1,044 | 173,884 | 4.42 |
| High | 1,044 | 187,113 | 5.42 |

## School deprivation level

The Income Deprivation Affecting Children Index (IDACI) was used to infer the level of income deprivation experienced by students. This measure was reported in the NPD for most of the students included in the research (that is, in state-maintained schools or academies) and indicates the proportion of children living in the immediate neighbourhood who were in low-income families[8]. 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 actually was).

[8] The definition of low income includes people who are out of work, but also those in work with low earnings. For further information on IDACI calculation, including definitions of children, families, and income deprivation, see https://www.gov.uk/government/publications/english-indices-of-deprivation-2015-technical-report

As with the attainment measure, this measure was recorded for each student and an average calculated for each school. Schools were then categorised into three equally sized groups ('Low', 'Medium' or 'High'). In some schools, this measure was missing for a significant proportion of students and the school level measure was only calculated for schools where at least 50% of students did not have missing data.

Table 3 displays the number of schools, the number of students and the mean of the school average deprivation score in each attainment group for the 2017/18 academic year. In 2018/19 and 2019/20 the number of schools and students in each group increased somewhat, but the means were exactly the same.

Table 3: School deprivation ranks (all schools, 2017/18)

| School deprivation | No. of schools | No. of students | Mean[9] |
|---|---|---|---|
| Low | 1,034 | 180,855 | 0.11 |
| Medium | 1,035 | 167,165 | 0.19 |
| High | 1,034 | 155,824 | 0.31 |

## School ethnic composition

As a crude estimator of the ethnic composition of each school, we calculated the percentage of students at the end of KS4 in the school who were not white (hereafter referred to as "ethnic minorities")[10]. Schools were then divided up into three groups, based on these percentages. Schools with fewer than 33.3% of ethnic minority students were categorised as 'low', schools with a percentage of ethnic minority students between 33.3% and 66.7% were categorised as 'medium' and those with more than 66.7% were categorised as 'high'. Table 4 shows the number of schools and students and the mean percentage of ethnic minority students in each group in 2017/18. In 2018/19 and 2019/20 the number of schools and students in each group increased somewhat, but the means were very similar.

Table 4: School ethnic composition (all schools, 2017/18)

| % Ethnic minority students | No. of schools | No. of students | Mean |
|---|---|---|---|
| Low (0 – 33.3%) | 2,316 | 372,701 | 10.11 |
| Medium (33.3 – 66.7%) | 445 | 74,231 | 48.57 |
| High (66.7% – 100%) | 336 | 55,656 | 84.47 |

[9] Interpretation of these means is not straightforward but could be taken as meaning the following: on average the pupils in a school in the low deprivation group lived in an area where 11% of children were living in low income families.

[10] Defining ethnicity in this binary way is not ideal (see https://www.gov.uk/government/publications/the-report-of-the-commission-on-race-and-ethnic-disparities/summary-of-recommendations, recommendation 24). However, for the purpose of this report, we needed a simple way to represent the ethnic composition of schools.

## Statistical analyses

In the following analysis changes to the overall volumes of qualifications over time will be presented to give some context. However, the main interest was in changes to qualifications eligible for the Progress 8 measure. This focus was on qualifications eligible for each of the three groups that comprise the Progress 8 measure (English and maths, EBacc qualifications and 'other' qualifications) and also on qualifications which are not eligible for Progress 8.

It was shown in the 2018 report (Gill, 2018) that schools with lower Progress 8 scores were more likely to increase uptake of qualifications eligible for Progress 8 (in the year after next). Therefore, an additional analysis was undertaken on the changes to uptake and provision depending on the Progress 8 score in a school. For this analysis, schools were split into five (approximately) equally sized groups based on their Progress 8 score (in 2017/18), and changes to uptake and provision of various qualifications and subjects between 2017/18 and 2019/20 were calculated. A gap of two years was used as this gave the schools some time to react to their Progress 8 score.

Table 5 presents descriptive data on the groups.

Table 5: School Progress 8 ranks (all schools, 2017/18)

| Progress 8 group | No. of schools | No. of students | Mean P8 score |
|---|---|---|---|
| 1 | 614 | 84,295 | -0.67 |
| 2 | 614 | 98,500 | -0.26 |
| 3 | 621 | 106,340 | -0.02 |
| 4 | 625 | 110,170 | 0.21 |
| 5 | 623 | 104,068 | 0.64 |

# Results

## Uptake of qualifications and subjects

Figure 1 presents the average number of qualifications (eligible for inclusion in league tables) taken by students between 2007/08 and 2019/20. This is measured in two different ways: firstly, a raw count of qualifications taken; secondly, a sum of qualifications in terms of GCSE sizes (e.g., a BTEC equivalent to three GCSEs). In this figure (and all other time-series line graphs in this report) the vertical line indicates the final year (2014/15) before the introduction of Progress 8, to show better the trends following its introduction.

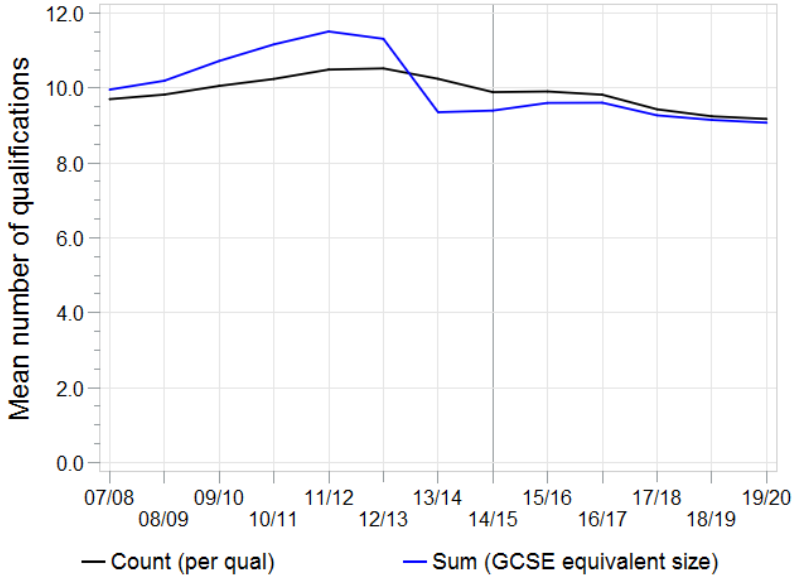


Figure 1: Mean number of qualifications taken (2007/08 – 2019/20)

Figure 1 shows that the mean number of qualifications taken has fallen slightly since 2016/17, and the gap between the raw number and the number in terms of GCSE equivalent size has narrowed.

Next, we looked at the number of qualifications taken, broken down by qualification type. Figure 2 presents the average number of GCSEs taken, and Figure 3 presents the average number of other qualifications taken.

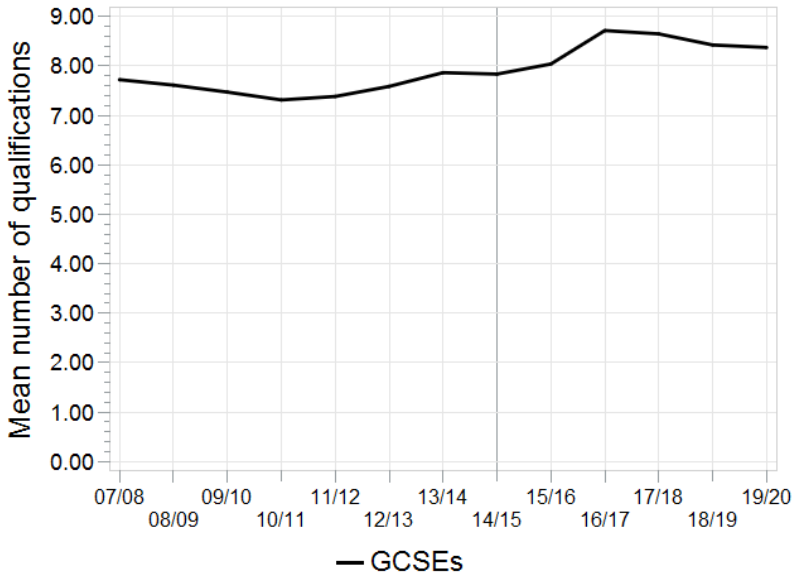


Figure 2: Mean number of GCSEs taken (2007/08 – 2019/20)

Figure 2 shows that there was a small decline in the mean number of GCSEs taken since 2016/17. Figure 3 shows declines in IGCSEs and VRQs and increases in BTECs and Cambridge Nationals from 2017/18 onwards. The decline in IGCSEs was due to these being no longer eligible for inclusion in Progress 8 from 2016/17 onwards. The decline in the uptake of VRQs was likely to be because some of these became non-eligible for Progress 8

(e.g., ECDL was no longer eligible from 2017/18). The increased uptake of BTECs and Cambridge Nationals may be partly due to centres replacing VRQs with these qualifications.

For each qualification in Figure 3, the number taken was very low compared with the numbers of GCSEs. By 2019/20, the most common qualification (BTECs) had an average of just 0.35 per student.

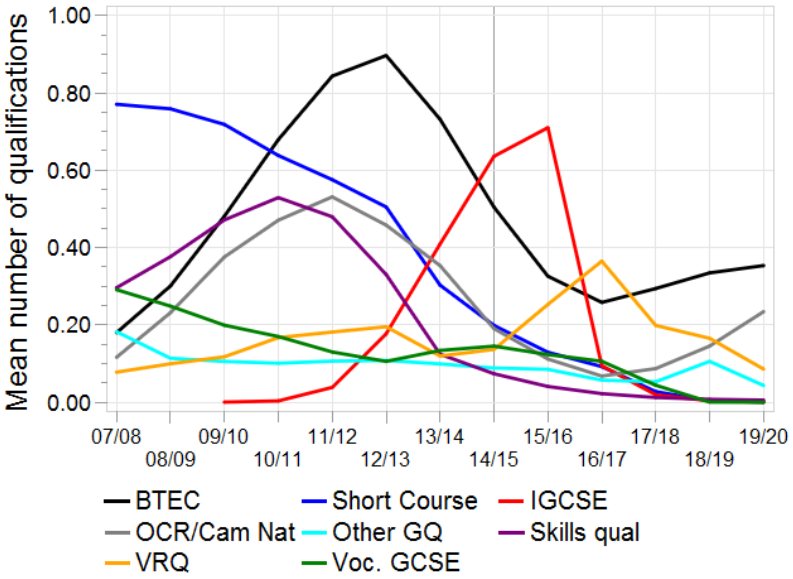


Figure 3: Mean number of non-GCSEs taken (2007/08 – 2019/20)

**Progress 8 qualifications**

Figure 4 shows the percentage of students who took the required number of each type of qualification for the full Progress 8, that is, students who filled all their Progress 8 slots.

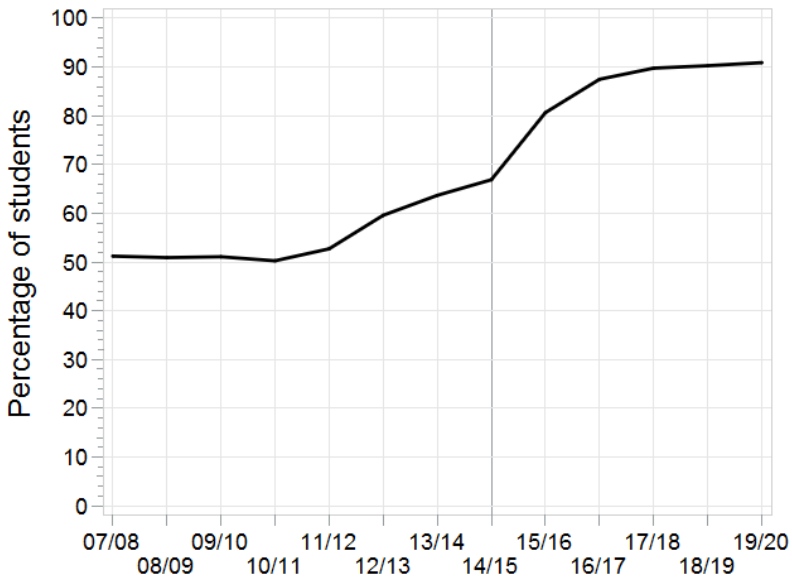


Figure 4: Percentage of students filling all Progress 8 slots (2007/08-2019/20)

After increasing substantially following the introduction of Progress 8, the number of students who filled all their Progress 8 has plateaued in the last few years at around 90%. This suggests that, without further incentives or changes to national policy, there will always be a minority of students who do not fill all of their slots.

Table 6 presents more details on the students who did not fill all their slots in 2019/20. The total number was 49,324 compared with around 65,000 in 2016/17.

Table 6: Students not filling all their Progress 8 slots (2019/20, percentages in brackets)

| | Filled 'Other' slots | | |
|---|---|---|---|
| **Filled EBacc slots?** | **No** | **Yes** | **Total** |
| No | 16,418 (33%) | 21,893 (44%) | 38,311 (78%) |
| Yes | 10,289 (21%) | 724 (1%) | 11,013 (22%) |
| Total | 26,707 (54%) | 22,617 (46%) | 49,324 |

In 2019/20, the majority (78%) of these students failed to fill all of their EBacc slots, and about 33% failed to fill either EBacc or 'Other' slots. About 21% did fill all their EBacc slots, but failed to fill all their 'Other' slots (with the remaining 724 not filling either their English or maths slot). Thus, most students were short of EBacc qualifications, rather than 'Other' qualifications. However, this is a shift compared with 2016/17, when a higher percentage (92%) failed to fill their EBacc slots, and a lower percentage (7%) failed to fill their 'Other' slots. This is a consequence of an increased uptake of EBacc qualifications and reduced uptake of 'Other' qualifications (see Figure 6).

Of the 38,311 students who failed to fill all their EBacc slots, 77% took two EBacc qualifications (excluding English and maths). In other words, there were a lot of students who could have increased their Progress 8 scores by entering just one more EBacc qualification (as long as they achieved a grade higher than 'U').

The remainder of the analysis compares the uptake of qualifications in the three elements of Progress 8 (English and maths, other EBacc and 'other'). Uptake of qualifications not eligible for Progress 8 was very low (an average of around 0.1 of a qualification per student), so no results on these qualifications are presented.

### English and Maths qualifications

The National Curriculum requires schools to offer English and maths qualifications to all students, so we expected the proportion of students taking these qualifications to have changed very little with the introduction of Progress 8. However, within English subjects there was some choice. Prior to 2016/17, students were able to choose between English language, English literature, and a combined English qualification. From 2017/18 the combined qualification was no longer available, so students were able to take either or both of English language and English literature. English qualifications were double weighted in the calculation of Progress 8 if both English subjects were taken.

Figure 5 presents the percentage of students taking each of the different English qualifications (eligible for Progress 8). In the last three years there has been almost no change in the percentages, with almost all students taking both English language and English literature.

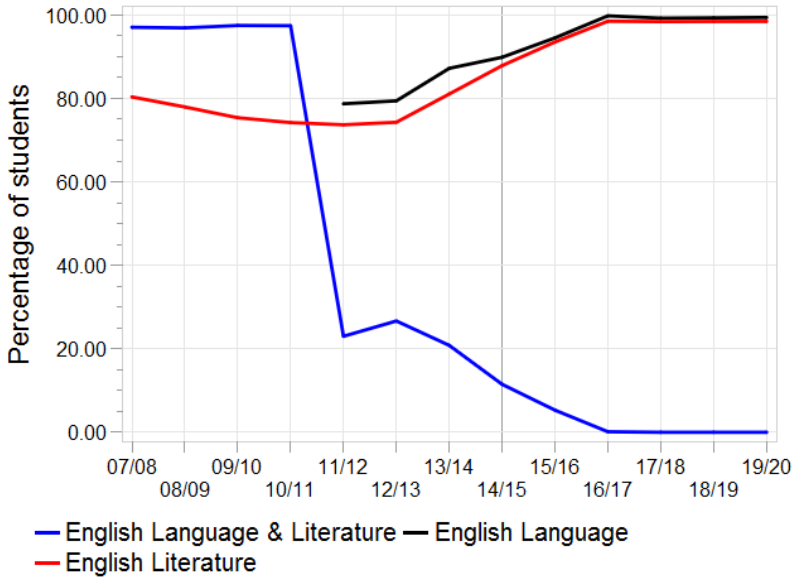


Figure 5: Mean number of English qualifications taken (2007/08-2019/20)

The proportion of students taking maths was very steady throughout the period at almost 100%, so this data is not presented here.

**EBacc and 'Other' qualifications**

Figure 6 presents the mean numbers of qualifications eligible for the EBacc slots (excluding English and maths) and eligible for the 'other' slots.

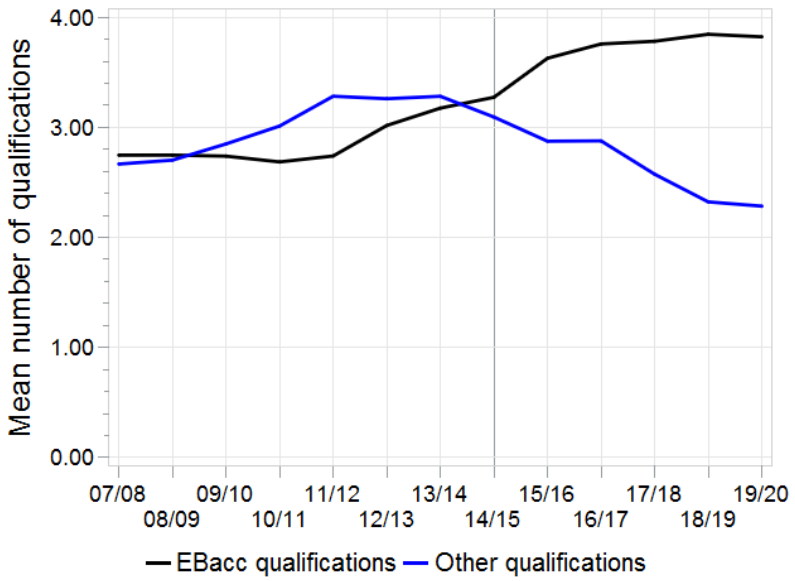


Figure 6: Mean number of qualifications taken, by qualification type (2007/08-2019/20)

This shows that since 2016/17 there has been a small increase in the mean number of EBacc qualifications taken and a substantial fall in the mean number of qualifications eligible for the 'other' slots.

Progress 8 requires students to take at least three EBacc subjects (excluding English and maths). Figure 7 presents the percentage of students taking each number of EBacc qualifications.

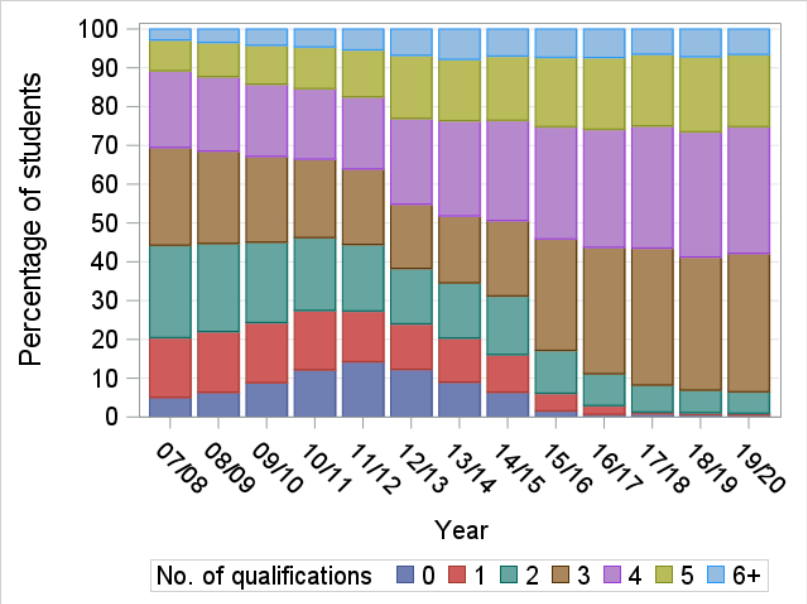


Figure 7: Distribution of the number of EBacc qualifications taken, excluding English and maths (2007/08-2019/20)

Since 2016/17 there has been a further increase in the percentage of candidates taking at least three EBacc qualifications, up to 93.5% in 2019/20 from 88.8% in 2017/18. In each of the last three years, the most common number to be taken was three (35.7% of students in 2019/20).

Figure 8 presents the percentage of students taking the most popular EBacc subjects (all GCSEs). In 2017/18 Core and Additional Science were replaced by a combined science double GCSE. For the separate sciences, only biology is included in the figure, as uptake of chemistry and physics was almost identical to biology (i.e., if you took one you were very likely to take all three).

Uptake of double science increased slightly between 2017/18 and 2019/20. There were also small increases for history and Spanish. Otherwise, there was very little difference in uptake levels since 2016/17.

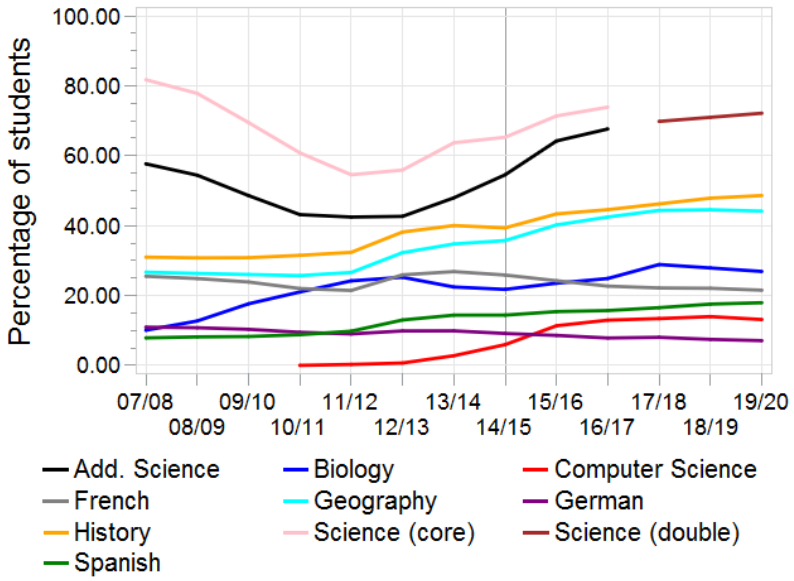


Figure 8: Percentage of students taking EBacc subjects (2007/08-2019/20)

Figure 9 presents the distribution of the number of 'other' qualifications eligible for inclusion in Progress 8[11].

Since 2016/17 there has been an increase in the percentage of students taking 1 or 2 of these qualifications, and a fall in the percentage taking 4 or more. In particular, the percentage taking at least 3 fell from 63.9% in 2016/17 to 41.7% in 2019/20. Recall that students can include EBacc eligible qualifications in the 'other' slots.


Figure 9: Distribution of number of subjects eligible for 'other' slots (2007/08-2019/20)

[11] As mentioned in the introduction, students taking both English language and English literature can only count the best grade as part of the English and maths slots but can include the other English qualification as part of the 'other' slot. Figure 9 excludes the additional English qualification.

In the ‘other’ slots, students can include GCSEs and non-GCSE qualifications. In the following figure (Figure 10), only the results for the GCSE subjects are presented, as uptake of other qualifications was very low between 2017/18 and 2019/20.

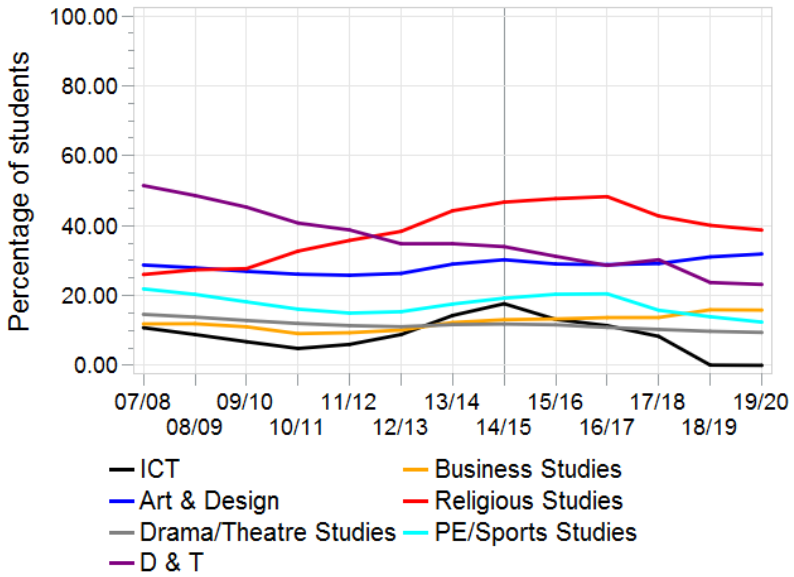


Figure 10: Percentage of students taking non-EBacc GCSEs (2007/08-2019/20)

ICT was dropped as a GCSE subject in 2018/19, which is why entries were at zero in the last two years. Since 2017/18, there have been falls in the uptake of religious studies, design & technology (D&T), and PE, and small increases in uptake of art & design and business studies.

### Uptake by school factors

Figure 11 presents the percentage of students achieving full Progress 8 entries, by school type.

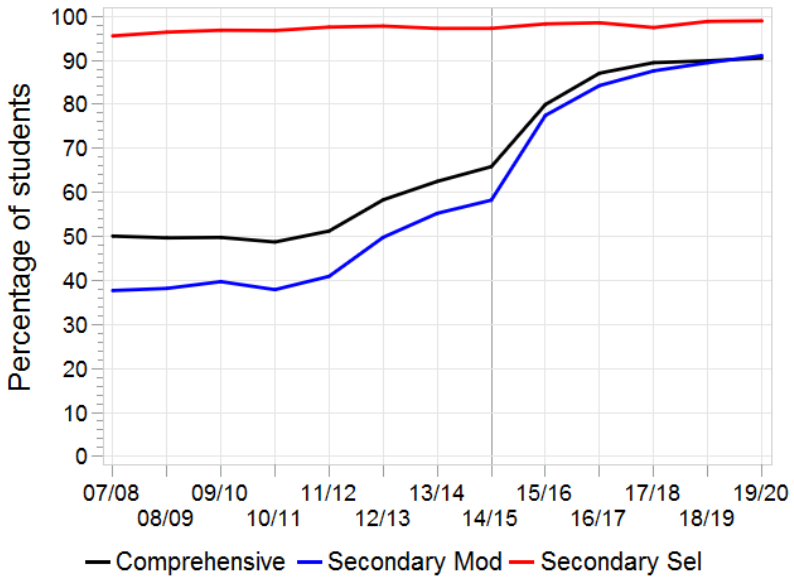


Figure 11: percentage of students achieving full Progress 8 entries, by school type (2007/08-2019/20)

Since 2016/17, the percentage of students filling all their Progress 8 slots in comprehensive or secondary modern schools has increased slightly and is steadily catching up with the percentage in selective schools. The percentage of selective school students remained very similar at close to 100%.

Figure 12 presents the average number of EBacc and 'Other' qualifications taken by students in different school types.

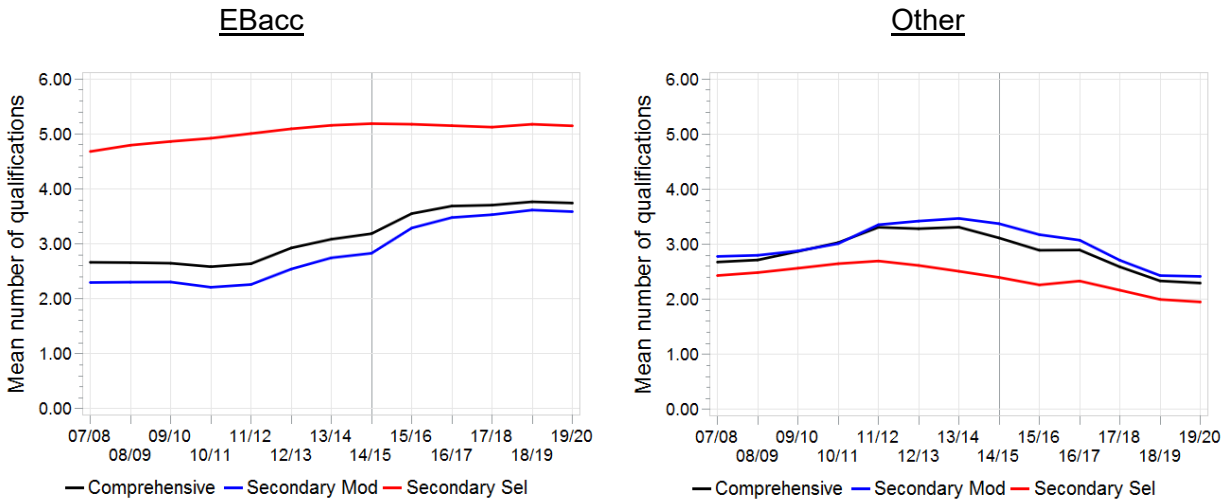


Figure 12: Mean number of EBacc and Other qualifications taken, by school type (2007/08-2019/20)

Between 2016/17 and 2019/20, the average number of EBacc qualifications increased only very slightly in comprehensive and secondary modern schools and remained constant in selective schools. The average number of 'Other' qualifications fell in all school types, but slightly more in comprehensive and secondary modern schools.

Figure 13 presents the percentage of students with full Progress 8 entries, by school attainment group.

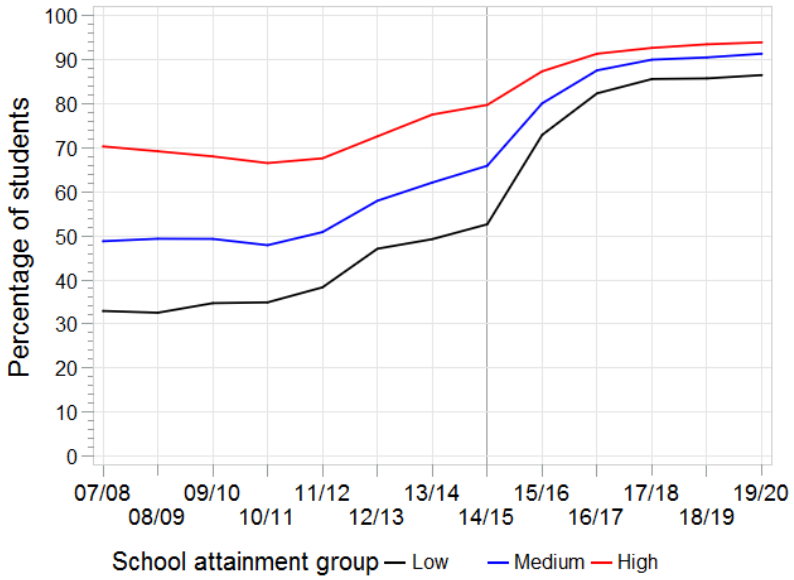


Figure 13: percentage of students achieving full Progress 8 entries, by school attainment group (2007/08-2019/20)

This shows almost no difference between the groups in the last three years, with the percentages remaining almost constant.

Figure 14 presents the mean number of qualifications eligible for the EBacc and Other slots taken by students, by school attainment group.

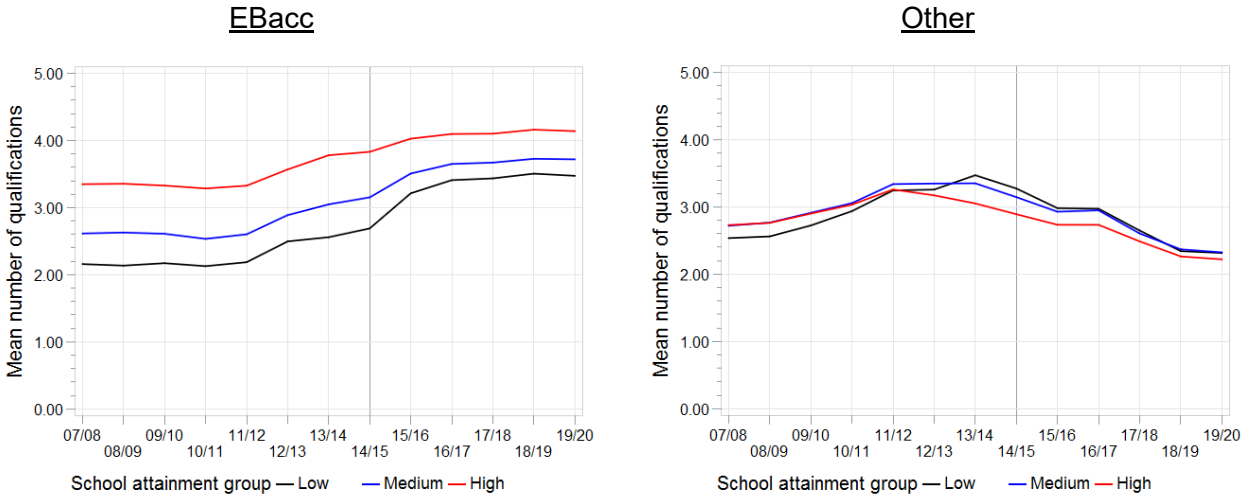


Figure 14: Mean number of EBacc and Other qualifications taken, by school attainment group (2007/08-2019/20)

Uptake of EBacc qualifications increased very slightly since 2016/17 in all the school attainment groups. Uptake of Other qualifications fell in all attainment groups, but slightly less in schools in the high attainment group.

Figure 15 presents the percentage of students with full Progress 8 entries, by school deprivation group. The percentages remained almost the same, in all three groups between 2017/18 and 2019/20.

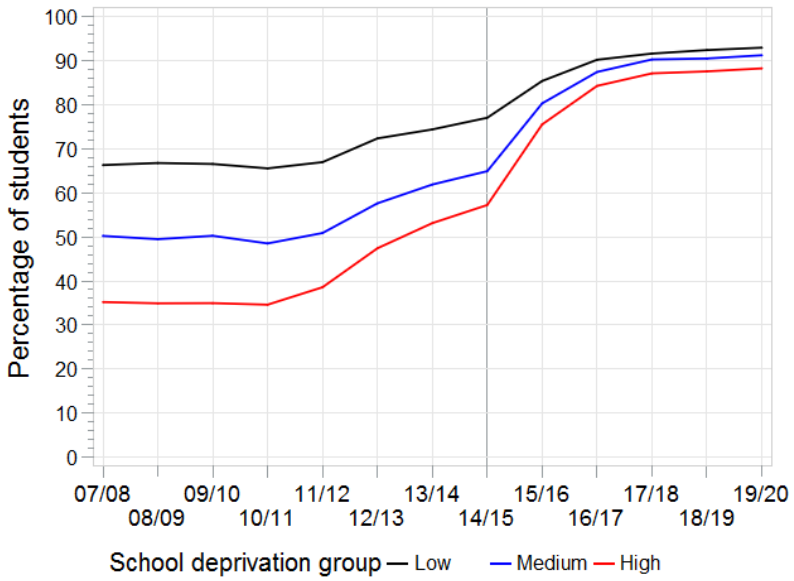


Figure 15: percentage of students achieving full Progress 8 entries, by school deprivation (2007/08-2019/20)

Figure 16 presents the numbers of EBacc and 'Other' qualifications taken by students, by deprivation group.

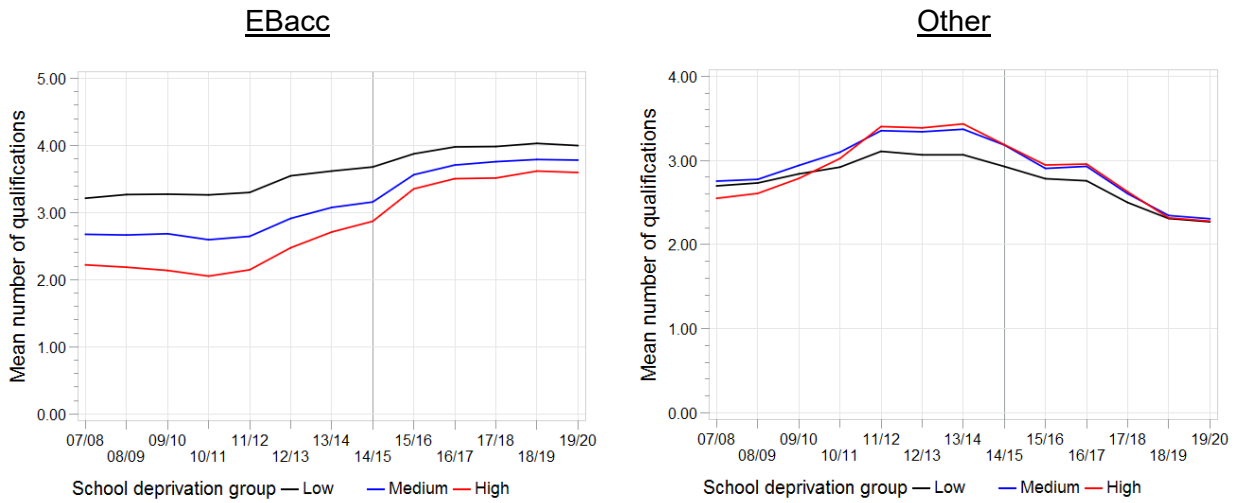


Figure 16: Mean number of EBacc and Other qualifications taken, by school deprivation group (2007/08-2019/20)

Uptake of EBacc qualifications increased very slightly since 2016/17 in all the school deprivation groups. Uptake of Other qualifications fell in all deprivation groups, but slightly less in schools in the low deprivation group.

Table 7 presents the mean number of EBacc and other qualifications taken by students in schools with differing percentages of ethnic minority students, for the years 2017/18 to 2019/20[12]. This shows an increase in the mean number of EBacc qualifications taken in schools with a high percentage of ethnic minority students (from 3.83 in 2017/18 to 3.95 in 2019/20), whilst there was no change in uptake in schools in the other groups. There was a reduction in the mean number of 'Other' qualifications taken and almost no difference between groups.

Table 7: Mean number of EBacc and Other qualifications, by school ethnic minority percentage group.

| Year | Mean no. of EBacc quals | | | Mean no. of Other quals | | |
|---|---|---|---|---|---|---|
| | Low | Medium | High | Low | Medium | High |
| 2017/2018 | 3.68 | 3.78 | 3.83 | 2.57 | 2.57 | 2.58 |
| 2018/2019 | 3.70 | 3.81 | 3.95 | 2.34 | 2.35 | 2.28 |
| 2019/2020 | 3.68 | 3.78 | 3.94 | 2.30 | 2.30 | 2.25 |

## Provision of qualifications and subjects

The introduction of Progress 8 has impacted on provision as some schools decided to drop some qualifications that are not eligible for the performance measure. They may also have decided to switch from non-eligible to eligible qualifications.

[12] This analysis was not included in previous reports, so is not available for years prior to 2017/18.

Figure 17 presents the percentage of schools offering non-GCSE qualifications. As virtually all schools offer at least one GCSE (full course), there is no need to present this data here.

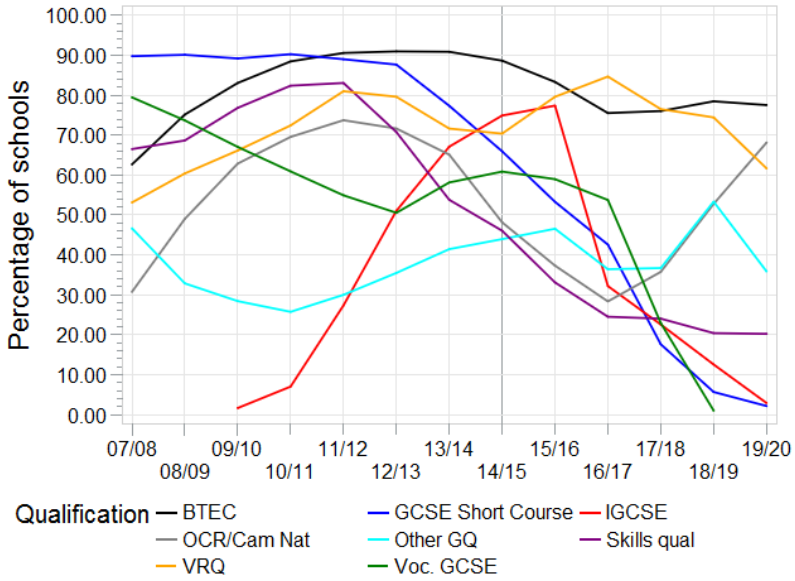


Figure 17: Provision of non-GCSE qualifications (2007/08-2019/20)

Since 2016/17, there have been further big reductions in the percentage of centres offering IGCSEs, GCSE Short Courses, and Vocational GCSEs. By 2019/20, very few schools were offering any of these. The decline in IGCSEs was due to these being no longer eligible for inclusion in Progress 8 from 2016/17 onwards, whilst Vocational GCSEs were phased out in the last three years. There was also a smaller decrease in the percentage offering VRQs, although this was still at just over 60% in 2019/20. There was a big increase in the percentage offering Cambridge Nationals (up to almost 70% in 2019/20). There was very little change in the provision of BTECs, which was the most popular non-GCSE qualification to be offered in 2019/20.

### EBacc and 'Other' qualifications

Table 8 presents the mean, standard deviation, minimum and maximum number of EBacc subjects offered by schools over time. This shows a big decline in the mean in 2017/18 (from 15.7 to 12.4), followed by an increase in 2018/19. The fall in 2017/18 was partly due to core and additional sciences (which counted as two subjects if both were offered by a centre) being replaced by combined science (which counts as one subject only).

Table 8: No. of EBacc subjects offered by centres (2007/08-2019/20)

| Year | Mean | S.D. | Minimum | Maximum |
|---|---|---|---|---|
| 2007/2008 | 12.9 | 3.9 | 0 | 31 |
| 2008/2009 | 13.3 | 4.1 | 0 | 32 |
| 2009/2010 | 13.8 | 3.8 | 0 | 33 |
| 2010/2011 | 14.1 | 3.9 | 0 | 41 |
| 2011/2012 | 15.8 | 4.0 | 0 | 36 |
| 2012/2013 | 16.4 | 4.1 | 0 | 44 |
| 2013/2014 | 16.5 | 4.1 | 0 | 42 |
| 2014/2015 | 16.5 | 4.1 | 0 | 40 |
| 2015/2016 | 16.9 | 4.1 | 0 | 40 |
| 2016/2017 | 15.7 | 3.9 | 0 | 34 |
| 2017/2018 | 12.4 | 2.3 | 0 | 23 |
| 2018/2019 | 14.1 | 3.3 | 0 | 26 |
| 2019/2020 | 13.8 | 3.0 | 0 | 25 |

Figure 18 presents the percentage of centres offering each of the most popular EBacc subjects, excluding English and maths (all GCSEs).

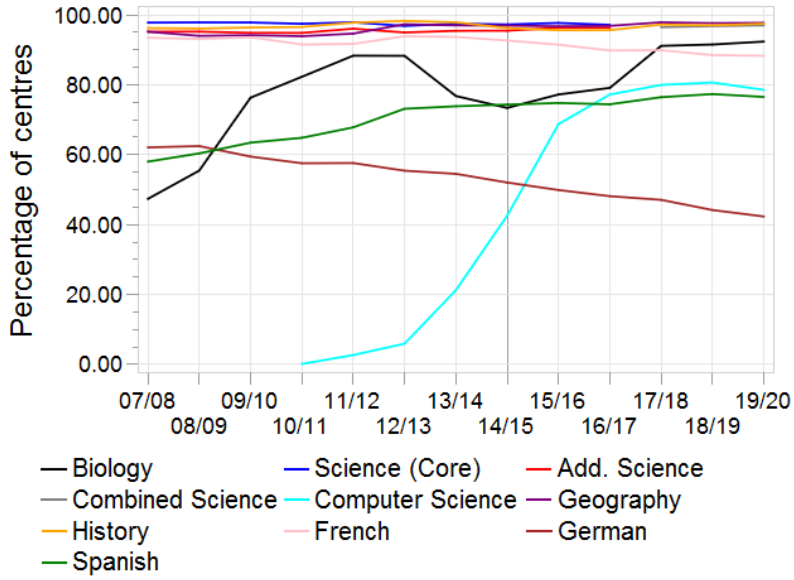


Figure 18: Provision of EBacc subjects offered by centres (2007/08-2019/20)

Since 2016/17, most subjects had no big changes in provision. However, there was a substantial increase in the percentage of centres offering biology (and by extension chemistry and physics), which may be related to the introduction of the combined science qualification. French and German had further small decreases in provision over the last 3 years.

Table 9 presents the mean number of qualifications offered by schools eligible for the 'other' slots.

Table 9: No. of 'Other' subjects offered by centres (2007/08-2019/20)

| Year | Mean | S.D. | Minimum | Maximum |
|---|---|---|---|---|
| 2007/2008 | 10.8 | 2.8 | 0 | 22 |
| 2008/2009 | 11.3 | 3.1 | 0 | 24 |
| 2009/2010 | 12.0 | 3.2 | 0 | 24 |
| 2010/2011 | 12.9 | 3.6 | 0 | 27 |
| 2011/2012 | 14.0 | 3.8 | 0 | 28 |
| 2012/2013 | 14.1 | 3.9 | 0 | 27 |
| 2013/2014 | 14.3 | 4.0 | 0 | 29 |
| 2014/2015 | 13.8 | 4.0 | 0 | 28 |
| 2015/2016 | 12.9 | 3.8 | 0 | 27 |
| 2016/2017 | 13.1 | 3.8 | 0 | 31 |
| 2017/2018 | 13.9 | 4.4 | 0 | 37 |
| 2018/2019 | 11.1 | 3.5 | 0 | 25 |
| 2019/2020 | 10.9 | 3.4 | 0 | 26 |

There was an increase in the mean in 2017/18, followed by a substantial fall in 2018/19.

Figure 19 presents the percentage of centres offering the most popular (in terms of uptake) non-EBacc GCSEs.

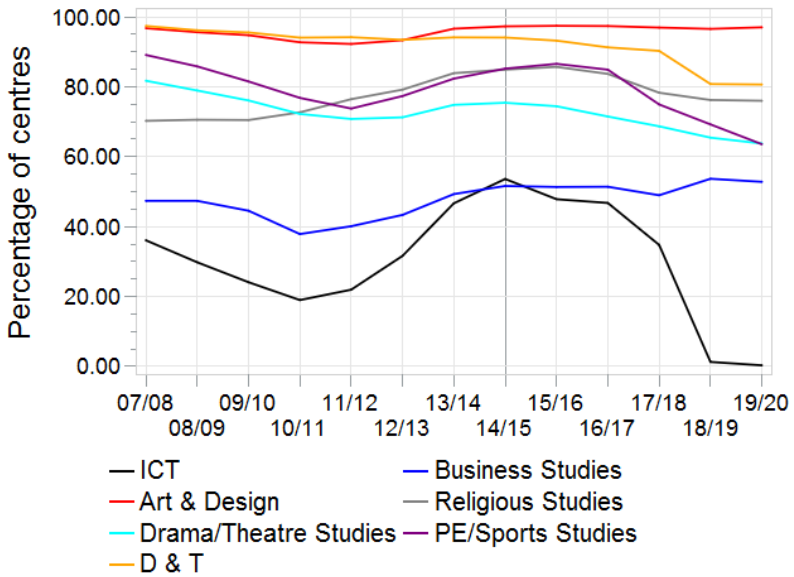


Figure 19: Provision of most popular non-EBacc GCSE subjects offered by centres (2007/08-2019/20)

The biggest change was for ICT, with a big reduction in provision due to it being dropped as a GCSE subject from 2018/19 onwards and schools therefore moving to other ICT or computer science qualifications. Other subjects also had some reductions in provision, particularly D & T and PE / sports studies.

**Provision by school factors**

Figure 20 presents the mean number of EBacc and 'Other' qualifications offered by schools of different types.

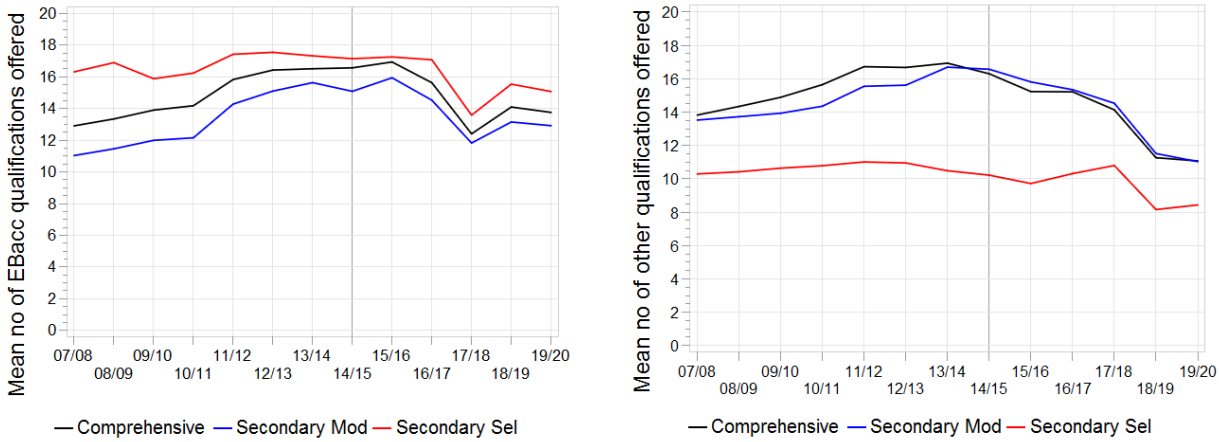


Figure 20: Mean number of EBacc and Other qualifications offered, by school type (2007/08-2019/20)

Since 2016/17 the changes to the mean number of EBacc subjects offered were very similar for the different school types. In terms of provision of 'Other' subjects, all three school types saw substantial decreases, but the gap between selective schools and the other two school types narrowed slightly.

Figure 21 presents the mean number of EBacc and Other qualifications, by school attainment category. This shows very little changes in provision between the groups.

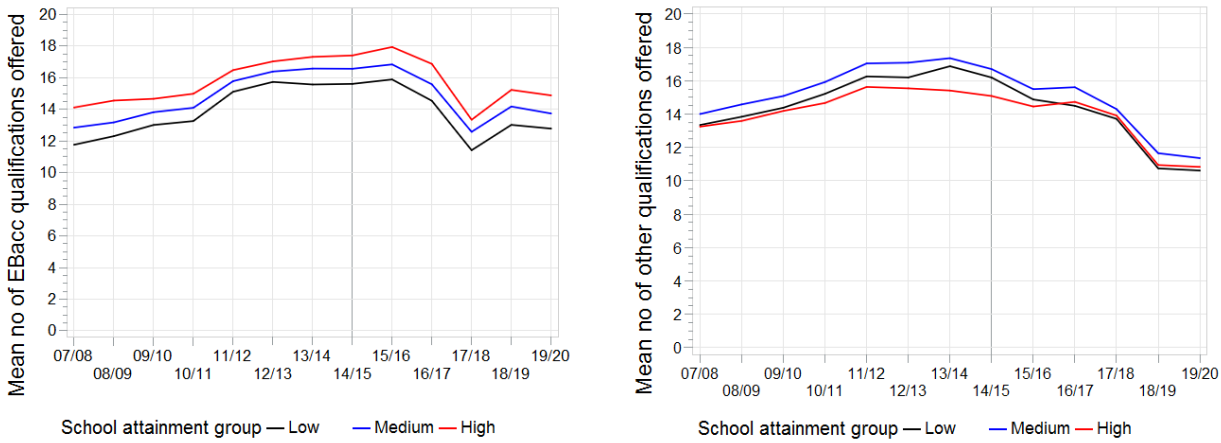


Figure 21: Mean number of EBacc and Other qualifications offered, by school attainment group (2007/08-2019/20)

Figure 22, which presents the same data by school deprivation group, shows that there were very few differences in provision in schools in the different groups in the last three years.

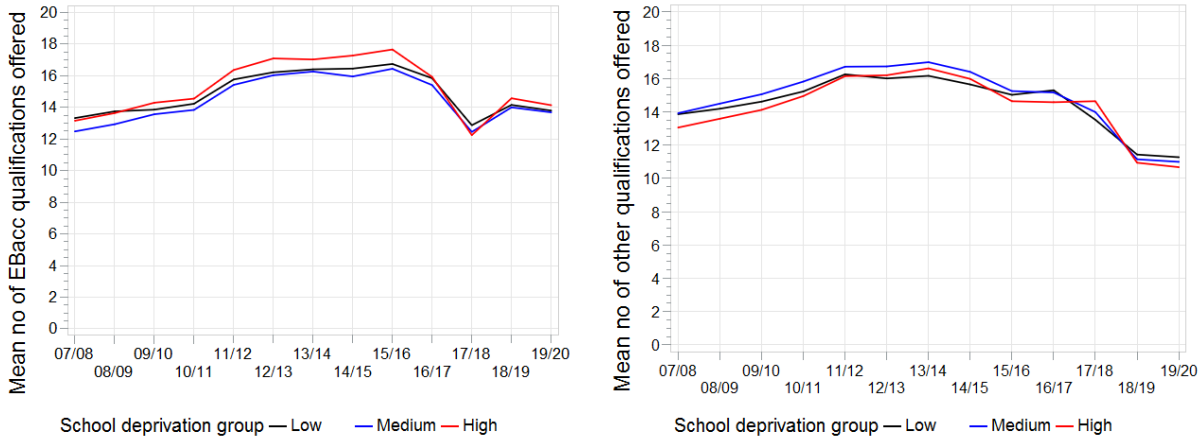


Figure 22: Mean number of EBacc and Other qualifications offered, by school deprivation group (2007/08-2019/20)

Finally, Table 10 presents the same data by school percentage of ethnic minority students (for the years 2017/18 to 2019/20 only). This shows that there was a larger increase in the mean number of EBacc qualifications offered by schools with a high percentage of ethnic minority students than by schools with lower percentages of ethnic minority students. In contrast, schools with a high percentage of ethnic minority students had the biggest fall in the mean number of 'Other' qualifications offered.

Table 10: Mean number of EBacc and Other qualifications offered, by school ethnic minority % group (2007/08-2019/20)

| Year | Mean no. of EBacc quals | | | Mean no. of Other quals | | |
|---|---|---|---|---|---|---|
| | Low | Medium | High | Low | Medium | High |
| 2017/2018 | 11.75 | 12.37 | 13.40 | 13.00 | 14.02 | 15.15 |
| 2018/2019 | 12.46 | 13.94 | 16.35 | 11.26 | 11.51 | 10.85 |
| 2019/2020 | 12.37 | 13.66 | 15.61 | 11.10 | 11.22 | 10.71 |

## Analysis of changes to uptake / provision, by Progress 8 score in 2017/18

### Changes to uptake

In all centres taken together there were small decreases in uptake of GCSEs and VRQs and small increases in uptake of BTECs and Cambridge Nationals between 2017/18 and 2019/20. Figure 23 presents the changes to the mean number of different qualifications taken by students in schools, broken down by Progress 8 score group (with group 1 consisting of centres with the lowest Progress 8 scores and group 5 the centres with the highest Progress 8 scores). Mostly, the changes to uptake over time were similar in all the Progress 8 groups. There were some small differences in BTECs and Cambridge Nationals, where uptake increased more in schools with lower Progress 8 scores and in VRQs where uptake decreased more in schools with lower Progress 8 scores.

Figure 24 presents the uptake of EBacc qualifications (together), by Progress 8 group. The graph on the left shows the mean number of EBacc qualifications taken, whilst the one on the right shows the percentage of students taking at least three EBacc qualifications. Both

graphs show that there was almost no difference between the groups, with all groups seeing small increases.

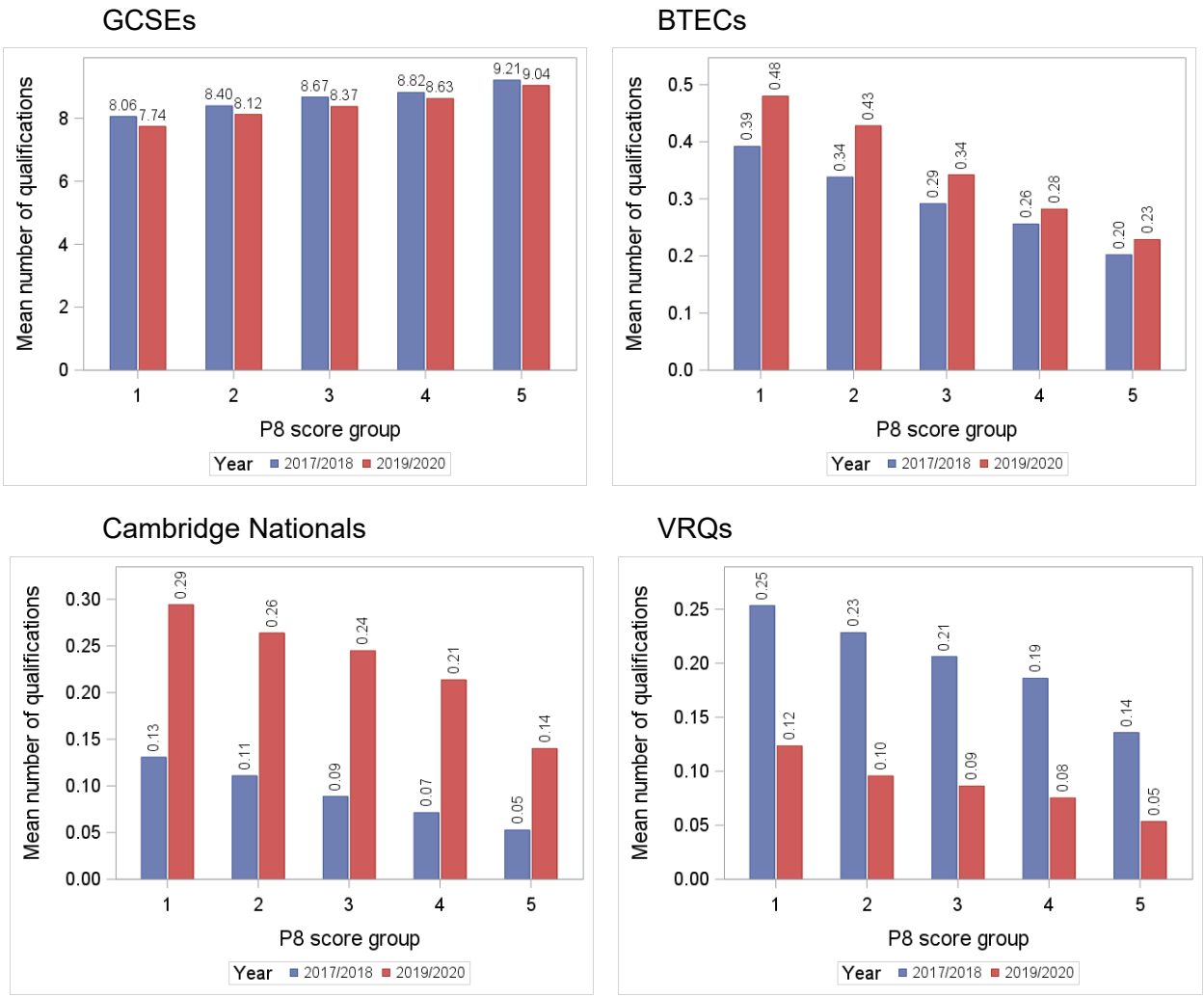


Figure 23: Changes to uptake levels in various qualifications (2017/18 and 2019/20)

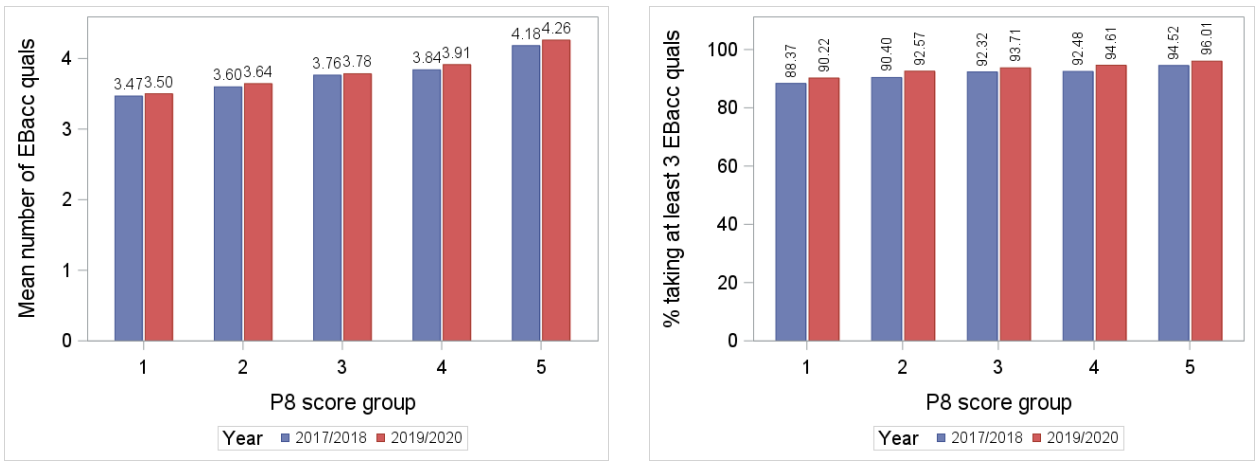


Figure 24: Changes to uptake levels in EBacc qualifications (2017/18 and 2019/20)

In terms of individual EBacc subjects, there was only one subject (GCSE computer science) which showed a substantial difference between groups. Figure 25 shows that uptake in schools in the lowest two Progress 8 groups decreased slightly, whilst uptake increased slightly in schools in the top Progress 8 group. Computer science counts as one of the EBacc subjects in Progress 8, so this does not suggest that schools with lower Progress 8 scores were trying to increase their score through getting more pupils to take EBacc qualifications.

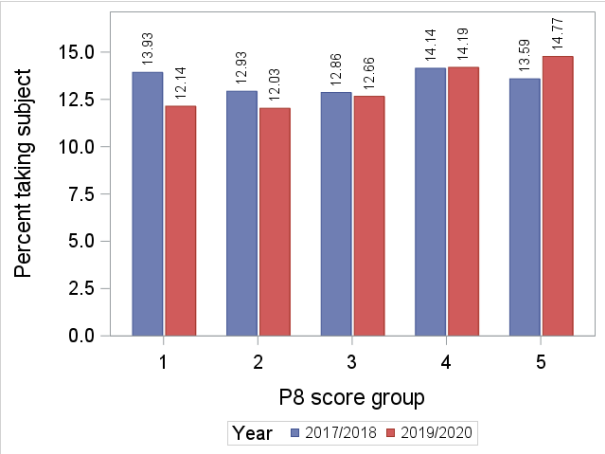


Figure 25: Changes to uptake levels in computer science (2017/18 and 2019/20)

### Changes to provision

Table 11 presents the mean number of EBacc qualifications and the number of qualifications eligible for the 'Other' slots offered by schools in 2017/18 and 2019/20, broken down by Progress 8 score group. In terms of provision of EBacc qualifications, there were small differences between the groups, with a larger increase in the mean for schools in the top Progress 8 group (1.6) than for schools in the bottom group (1.1). In contrast, the mean number of 'other' qualifications fell more in the top Progress 8 group (3.9) than in the bottom group (3.2).

Table 11: Mean number of EBacc and Other qualifications offered by schools, by Progress 8 score group (2017/18 and 2019/20)

| P8 score group | EBacc qualifications | | Other qualifications | |
|---|---|---|---|---|
| | 2017/2018 | 2019/2020 | 2017/2018 | 2019/2020 |
| 1 | 11.5 | 12.6 | 14.8 | 11.6 |
| 2 | 12.2 | 13.5 | 16.3 | 13.1 |
| 3 | 12.7 | 14.0 | 16.8 | 13.1 |
| 4 | 13.0 | 14.6 | 16.8 | 12.9 |
| 5 | 13.5 | 15.1 | 15.4 | 11.5 |

Changes in the provision of each EBacc subject were investigated for schools in each of the Progress 8 score groups. Only in one subject (GCSE computer science) were there any substantial differences between groups. This can be seen in Figure 26.

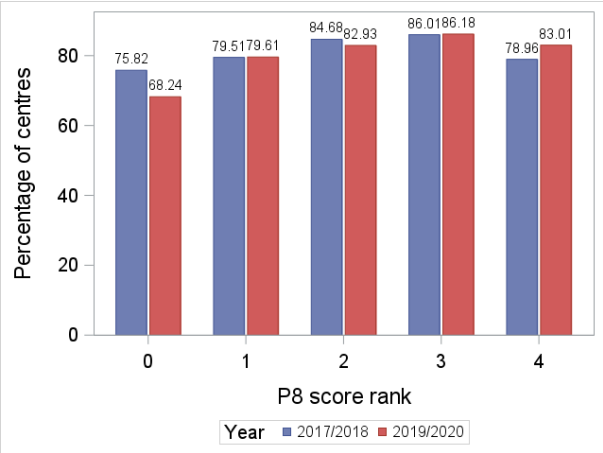


Figure 26: Changes to provision levels in computer science (2017/18 and 2019/20)

As with the uptake figures for computer science (see Figure 25), this shows that provision in the lowest Progress 8 group decreased slightly, whilst provision increased slightly in schools in the top Progress 8 group.

## Is there evidence of centres swapping qualifications?

The results reported in the sections above and in previous reports (Gill, 2017; Gill, 2018) suggested a movement by some centres from qualifications which were not eligible for the EBacc or 'Other' slots of Progress 8, over to qualifications which were eligible. We investigated this further using the data from the most recent years and found that this effect was particularly marked in two groups of qualifications: ICT and business studies.

Table 12 presents mean levels of uptake in centres offering any of the listed ICT qualifications in 2017/18, 2018/19 and 2019/20. The table also shows which of the qualifications were eligible for inclusion in Progress 8 in each year. We can see a clear pattern of the changes to uptake following changes to eligibility. For example, the BTEC in Computer Architecture was only eligible in 2017/18, and uptake fell after this. Similarly, the Other GQ in Applied ICT was eligible in 2017/18 and 2018/19, but not 2019/20 and uptake fell significantly in 2019/20. The VRQ in IT (mainly made up of the ECDL) saw big reductions in uptake in 2018/19, compared with 2017/18, despite it being not eligible for Progress 8in any year. However, this qualification was dropped from the 2017/18 league tables at short notice (see https://schoolsweek.co.uk/ecdl-dropped-from-2018-league-tables-12-months-earlier-than-planned/) meaning that many students intending to complete the course in 2017/18 would have already started it. Finally, uptake of GCSE ICT fell in 2018/19. However, this was due to it no longer being available as a qualification.

Uptake increased in the Cambridge Nationals qualifications in 2019/20, which is likely to be because these were eligible for Progress 8 in that year, when some other ICT qualifications became ineligible. Similarly, uptake of the BTEC in Digital Information Technology increased in 2019/20, after it became eligible. Finally, uptake of the Other GQ in Applied ICT increased in 2018/19, presumably because it was eligible whilst other qualifications had become ineligible.

Table 12: Progress 8 eligibility and uptake of ICT qualifications (2017/18 – 2019/20)

| Qualification | Eligibility for Progress 8 | | | Mean uptake 2018 | Mean uptake 2019 | Mean uptake 2020 |
|---|---|---|---|---|---|---|
| | 2018 | 2019 | 2020 | | | |
| Cam Nat in ICT / Creative iMedia | Y | Y | Y | 5.2 | 5.5 | 9.2 |
| GCSE in ICT | Y | N | N | 9.5 | 0.1 | 0.0 |
| VRQ in IT | N | N | N | 11.6 | 1.9 | 0.5 |
| BTEC in Computer Architecture | Y | N | N | 2.3 | 0.3 | 0.0 |
| BTEC in Digital Information Tech. | N | N | Y | 0.0 | 0.0 | 4.1 |
| Other GQ in Applied ICT | Y | Y | N | 1.6 | 7.6 | 0.3 |

We investigated this pattern further by looking at changes to uptake of these qualifications between 2017/18 and 2018/19 or between 2018/19 and 2019/20 within centres. Only centres with entries in at least one of the qualifications in at least one of the years were included. The results of this analysis are presented in Appendix A. These figures plot, for each centre, the change in uptake (percentage of pupils taking the qualification in the centre) of one qualification (or qualifications) against the change in uptake of the alternative qualification (or qualifications). Figure A1 presents changes between 2017/18 and 2018/19 and Figure A2 presents changes between 2018/19 and 2019/20.

In each of the figures, most of the datapoints (centres) are in the bottom right-hand quadrant, indicating that they had a fall in uptake of the qualification(s) on the y-axis, accompanied by an increase in uptake of the qualification(s) on the x-axis. In each case, larger reductions in one qualification were associated with larger increases in the other. This suggests that most centres were directly replacing one qualification with the other.

Table 13 presents eligibility for Progress 8 for the listed business studies qualifications and mean levels of uptake in centres offering any of these in 2018/19 and 2019/20. Uptake levels in 2017/18 were very similar to 2018/19 so are not presented here.

Table 13: Progress 8 eligibility and uptake of business studies qualifications (2018/19 – 2019/20)

| Qualification | Eligibility for Progress 8 | | Mean uptake 2019 | Mean uptake 2020 |
|---|---|---|---|---|
| | 2019 | 2020 | | |
| BTEC Business Studies | Y | N | 15.0 | 0.3 |
| BTEC Small Business Management | Y | Y | 0.5 | 12.9 |
| Cam Nat Small Business Management | Y | Y | 2.1 | 5.4 |

This shows a big fall in uptake of BTEC Business Studies in 2019/20, following its removal from Progress 8 eligibility. Uptake of the other two qualifications increased in 2019/20, as these were still eligible.

Appendix B presents the change in uptake within centres for pairs of these qualifications. Again, these reveal that most centres had a fall in uptake of one qualification and an increase in uptake of the other, suggesting that schools were moving from the non-eligible to the eligible qualifications.

# Conclusion

The results presented in this report suggest that most schools are now fully adjusted to Progress 8 as the main accountability measure. In the years 2017/18 to 2019/20 there were very few changes to the average number of GCSEs taken, the average number of EBacc qualifications taken and to the uptake of subjects eligible for the EBacc slots. Furthermore, the (small) changes to the mean number of EBacc subjects taken over the past three years were not related to the Progress 8 score in the school. This suggests that even schools with low Progress 8 scores did not try and improve their score by getting students to take more EBacc qualifications. This contrasts with the results from the 2018 report (Gill, 2018), where centres with low Progress 8 scores tended to increase the mean number of EBacc qualifications their students took more than centres with high scores.

There was a small decrease in the last three years in the mean number of qualifications taken that were eligible for the 'Other' slots. This was a continuation of a steady decline since 2013/14. In this category, there were decreases in uptake of some of the most popular non-EBacc GCSEs (religious studies, D & T, and PE)

The percentage of pupils who took enough qualifications to fill all the Progress 8 slots was almost unchanged at around 90%. Of the remaining pupils, most failed to fill the EBacc slots, rather than failing to fill the 'Other' slots. It seems likely, therefore, that there will always be some pupils who fail to fill all their slots, most of whom are likely to be lower attaining students for whom taking eight qualifications is unrealistic.

However, it is clear that schools were still taking note of which subjects were eligible for inclusion in Progress 8 and made decisions based on this. Figures A1, A2 and B1 in the appendices showed evidence that when one qualification became ineligible for Progress 8, schools were likely to enter fewer candidates for that qualification and more for an alternative which was eligible. There is no reason to suggest that this pattern will not continue in the future.

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# Appendix A

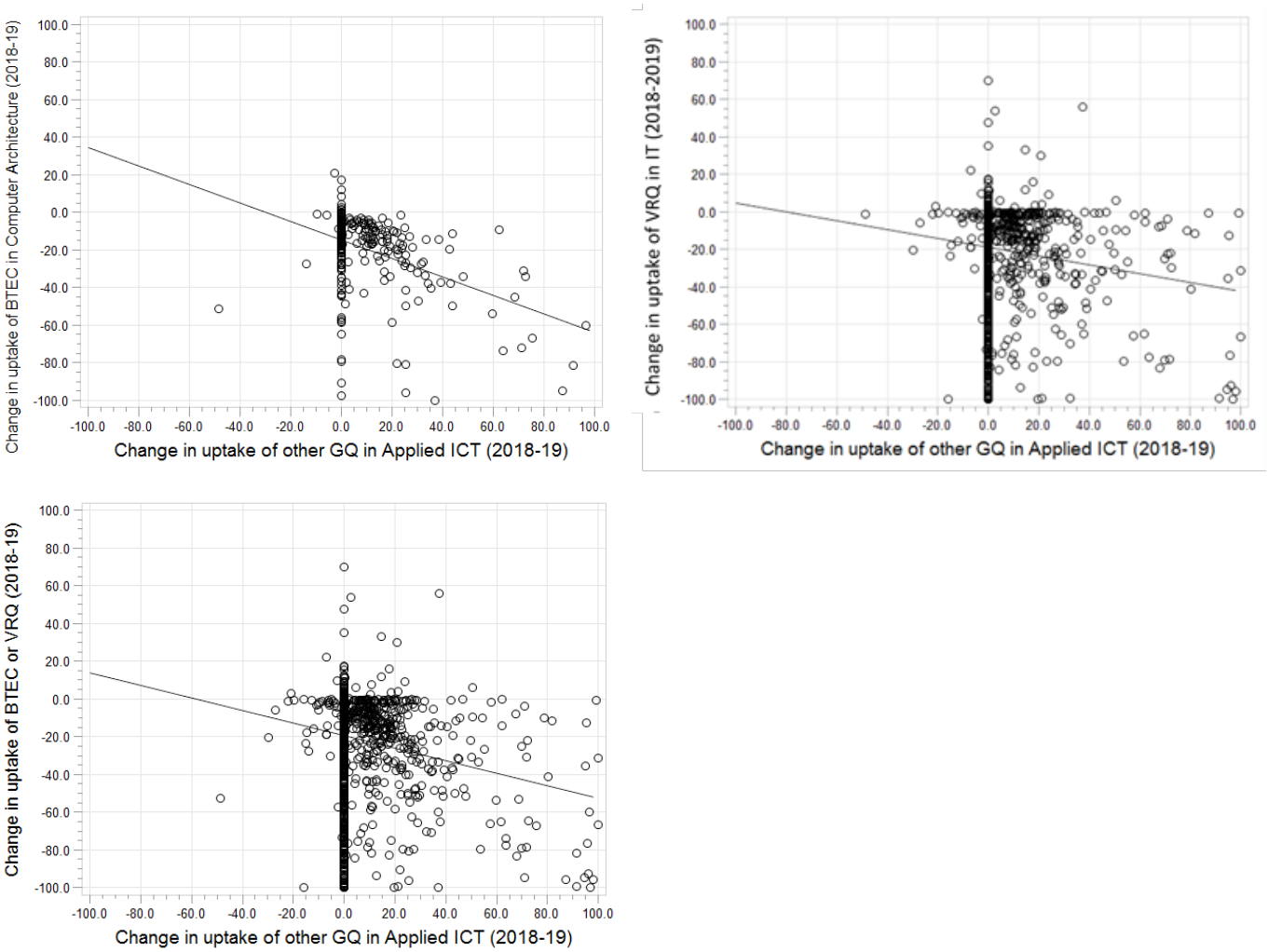



Figure A1: Centre level changes to uptake of ICT qualifications 2017/18 – 2018/19

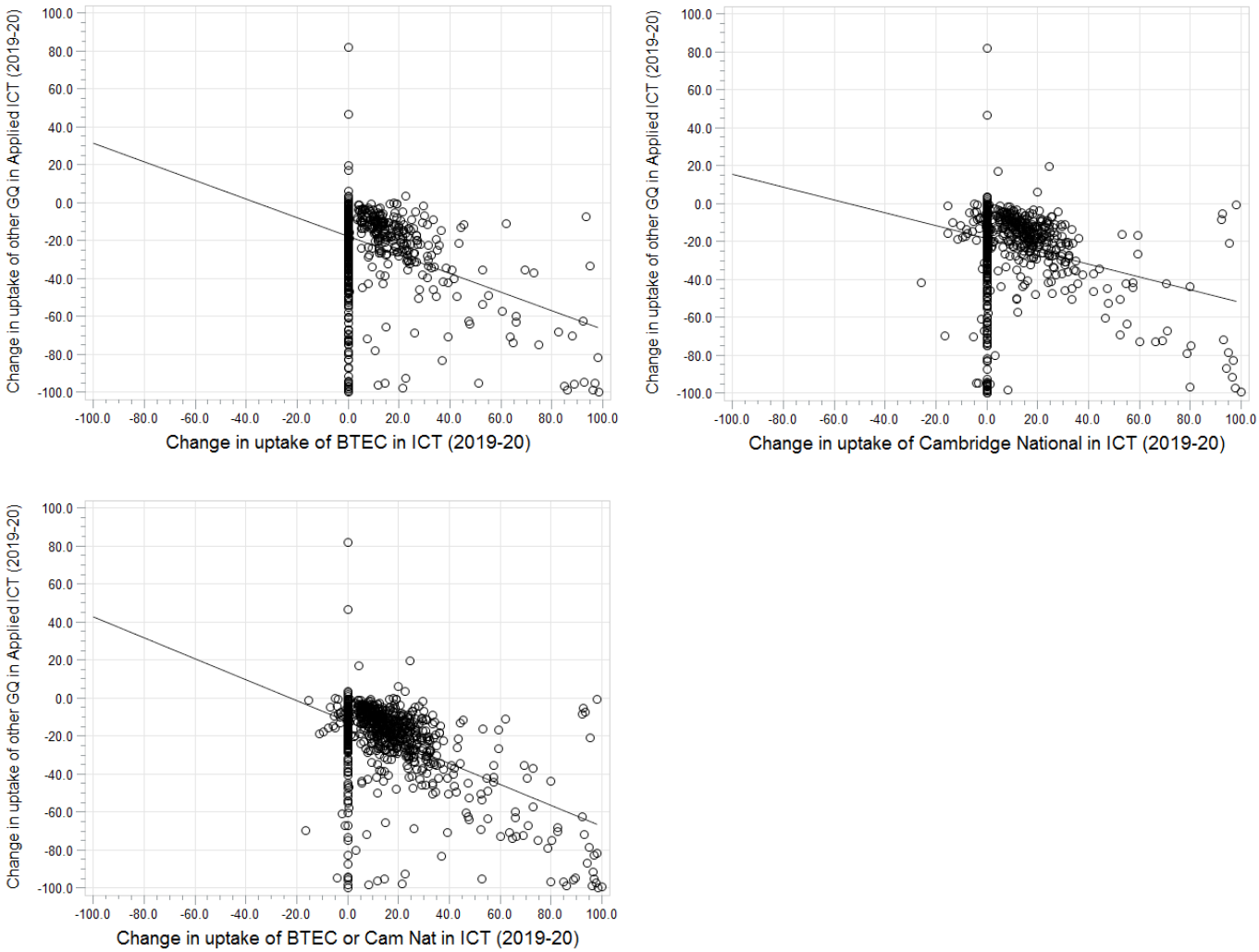
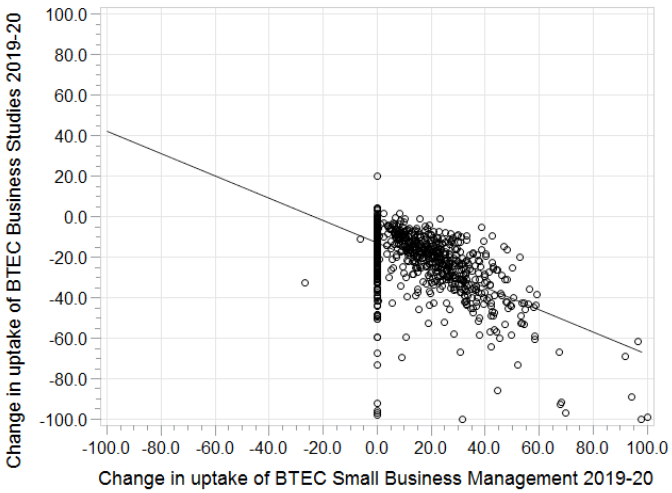
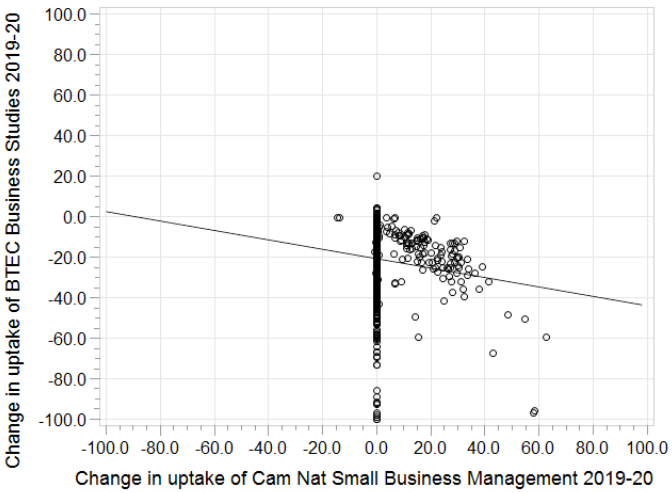



Figure A2: Centre level changes to uptake of ICT qualifications 2018/19 – 2019/20

# Appendix B



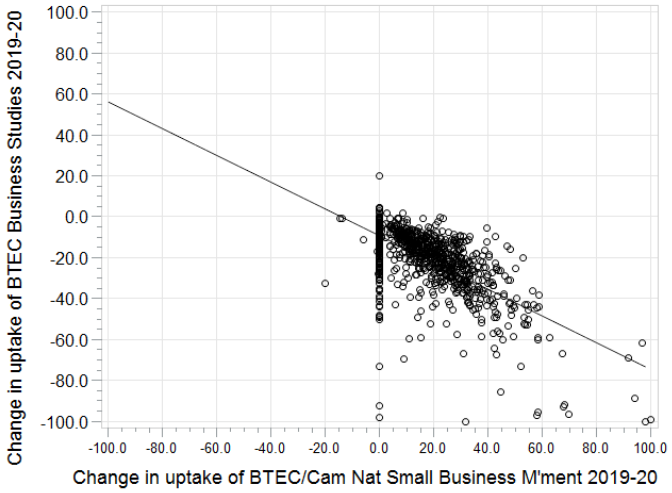




Figure B1: Centre level changes to uptake of Business Studies qualifications 2018/19 – 2019/20