An analysis of grades awarded for a number of VTQs in spring and summer 2020

Applied General qualifications, other Performance Table qualifications, Functional Skills qualifications, and Other General qualifications

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Executive summary

Due to the coronavirus (COVID-19) pandemic, many assessments could not take place and grades could not be awarded as normal this spring/summer. As a result, a number of mitigation measures had to be put in place instead. The purpose of this report is to analyse the grades that were awarded in light of these circumstances for a number of Vocational and Technical Qualifications (VTQs), including an analysis of equalities.

Through our analyses, we evaluate the appropriateness and fairness of the set of grades issued this spring/summer, to understand the extent to which outcomes are similar to previous years, as well as to check that certain groups of learners have not been unfairly advantaged or disadvantaged over others. We specifically focus on a number of higher stakes qualifications: Applied General qualifications as well as other qualifications included in the Department for Education's 2020 performance tables, Functional Skills qualifications, and 'Other General' qualifications.

We collected data from awarding organisations on all learners in England awarded a grade this spring/summer for exams and other assessments (collectively referred to as 'assessments' in this report) taken between 20 March and 31 July (the period covered by the [Extraordinary Regulatory Framework which was put in place by Ofqual in response to COVID-19](#)).

We also collected data for the same period of time in 2018 and 2019, so that trends over time could be observed. Where VTQ grades were reissued following the change in awarding approach for GCSEs, AS and A levels this summer, it is those reissued VTQ grades that are included in this report.

The main findings are summarised as follows:

1. the total number of grades awarded for Functional Skills qualifications has decreased in 2020 compared to 2019, although this appears to be a continuing trend from 2018. The same pattern was observed for Level 1/2 and Level 4 Other General qualifications. Level 1/2 Performance Table qualifications and Level 3 Applied General qualifications have seen an increase in entry size over time.

   For Entry Level Other General qualifications and Level 3 Performance Table qualifications (excluding Applied General qualifications), there was a more sudden decrease in entry size this year, suggesting this decrease may be specific to the 2020 situation.

   It is difficult to know with certainty whether or not any of these observations are attributable to restrictions put in place because of the coronavirus (COVID-19) pandemic or some other explanation, but this may suggest some change in entry behaviour this year, particularly for certain types of qualifications

2. overall, the general shape of grade distributions this year appear generally similar to the shape of grade distributions observed in previous years, suggesting overall that the profile of outcomes was not unduly influenced by

awarding process in 2020. However, there was a notable increase in the number of top grades being awarded for certain types of qualifications: most notably, some Level 1/2 Other General qualifications and Performance Table Qualifications, and some Level 3 Applied General and other Performance Table Qualifications.

This is largely due to the reissuing of VTQ grades following the change in approach to awarding for GCSEs, AS and A levels, where many VTQ grades were moved upwards. While there may have been some change in outcomes this year, findings suggest that cohorts overall have not been disadvantaged this year compared to previous years

3. equalities analyses showed that, in most cases, attainment gaps do not seem to have increased over time between different demographic groups. There are some specific cases where attainment gaps appear to have changed over time (for example, between males and females in Level 1/2 and Level 3 Other General qualifications and Level 3 Performance Table qualifications, excluding Applied Generals), although these apparent differences seem small in real terms and it is difficult to know what the exact cause of these may be (for example, these findings could reflect a genuine change in ability of cohorts over time). It should be noted that this particular analysis was performed on a sample of the overall cohort only.

Overall, the findings suggest that attainment gaps do not seem to have increased over time between different demographic groups. Although there may have been some change in the patterns of outcomes this year for some types of qualifications, cohorts have not been disadvantaged.

A degree of change is expected in any given year, and the majority of changes reported here are in line with those expectations. We shall continue to monitor the system as response measures change in the months to come.

1 Background and purpose

On 9 April 2020 the Secretary of State for Education issued a [direction, issued to Ofqual,](#) stating that assessments for Vocational and Technical Qualifications (VTQs) could not proceed as planned in the spring and summer of 2020, due to the restrictions put in place due to the coronavirus (COVID-19) pandemic. For GCSEs, AS and A levels, the government direction was that learners should receive calculated results based upon their centre's judgments of their ability, supplemented with other evidence[1].

For VTQs, however, it was recognised that the diversity and complexity of the sector meant that the same approach would not be appropriate for all qualifications. Awarding organisations subsequently took a range of mitigation approaches, as detailed in Ofqual's [Extraordinary Regulatory Framework (ERF)](#), including calculated results and adapted assessments (e.g. moving a paper-based test online). Where neither approach was appropriate (for example with qualifications that signal occupational competence, in safety-critical industries), assessments were delayed.

As results were not issued in the same way as in previous years for these qualifications, it was important for us to explore any changes over time so as to ensure that no particular groups of learners were unfairly advantaged or disadvantaged by the approaches taken this year, relative to previous years.

In doing so, we hoped to ensure that awarding processes have remained as fair as they can be this year, despite the challenges posed by the coronavirus (COVID-19) pandemic. In particular, this report sought to explore the following research questions:

1. were more or fewer grades in total awarded this year compared to previous years? If so, this could be evidence of a change in entry behaviour

2. were grade distributions substantially different this year compared to previous years? If so, this could be evidence of a change in standards

3. were certain groups of learners seemingly advantaged or disadvantaged relative to their peers to a greater degree this year compared to previous years? If so, this could be evidence of bias towards or against this year's cohort

The focus of this report is on vocational and technical qualifications that tend to be used for higher stakes purposes, such as those that are used for progression to further or higher education, or for progression straight into employment. Specifically, qualifications included in this report were Applied General qualifications or qualifications otherwise included in the Department for Education's 2020 performance tables[2], and/or those having a qualification type of 'Other General

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[1] This decision was later changed, [as outlined here](#).

[2] Listed separately on www.gov.uk for [Key stage 4 qualifications](#) and [16 to 18 qualifications](#).

Qualification', and Functional Skills qualifications. Qualifications were only included if they were in scope of the ERF.

We present some more information on the data collected for these analyses in the section below, before exploring each of the above questions in turn.

1.1 Data source

We collected data from 33 awarding organisations for 1,008 qualifications (not including any separate routes/pathways within those qualifications) that matched one of the aforementioned qualification types. Awarding organisations (AOs) were asked to provide to Ofqual the qualification-level grades awarded to all learners in centres in England who took or would have taken assessments for these qualifications between 20 March 2020 and 31 July 2020, the period of time covered by the ERF.

Where grades had not been fully finalised yet, provisional grades were accepted for the purpose of these analyses. For some VTQs, grades were reissued as a result of the change in approach to awarding for GCSEs, AS and A levels[3]. The analyses performed within this report used those reissued grades where applicable.

To allow us to explore trends over time, data was also collected for all learners in England who took assessments for the same qualifications in 2018 or 2019, for the equivalent time period (20 March to 31 July).

In order for us to conduct equalities analyses (Research Question 3 mentioned above), we required more information on the demographic/socio-economic characteristics of learners than was present in the data collected from awarding organisations. We therefore used some additional fields from the Individualised Learner Record (ILR; maintained by the Education and Skills Funding Agency), in addition to the data provided by AOs to Ofqual.

To combine the two datasets, we developed a stepwise rules-based method that identified matching records of individual learners in both the datasets. The method used a set of common fields to identify the matches including name, surname, date of birth, Unique Leaner Number (ULN) and qualification number. The search for matching records using the set of common fields was performed in several stages.

First the full set of common fields was used. At each subsequent stage, the set of common fields was progressively reduced according to predetermined rules and new matching records identified. This was required to accommodate incomplete or missing data as well as variations and errors present in the data. Name, surname and date of birth was the final combination of unique identifiers used to find new matching records in both datasets.

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[3]

The decision relating to GCSEs, AS and A levels:
https://www.gov.uk/government/publications/changes-to-awarding-of-gcse-as-and-a-level-guide-for-teachers-student-parents-carers-summer-2020

The decision relating to VTQs:
https://www.gov.uk/government/news/statement-on-grading-vocational-and-technical-qualifications-this-summer

Using this approach, we were able to match demographic information fields to 46% of the Level 1/2 learners and 36% of the Level 3 learners in the AO-provided data (overall, 45% of learners were successfully matched). This level of matching does represent a potential limitation of the equalities analysis, as only a sample of learners were considered. While there are no reasons to assume this sample would be biased in any way, there can be no guarantees that it is fully representative of the overall cohort.

2 Numbers of grades over time

In this first analysis section, we address Research Questions 1 and 2, to see whether or not there appears to have been a change in entry behaviour or a change in standards this year compared to 2018 and 2019.

Results are presented separately for different qualification levels. Please note that we use the term 'Level 1/2 qualifications' to refer to the collection of qualifications offered at Level 1, Level 1/2, and Level 2. Also note that Entry 1, Entry 2 and Entry 3 qualifications are grouped together under the term 'Entry Level qualifications'.[4]

2.1 Total number of grades over time

We first show how the total number of grades issued over time has changed. This analysis gives an indication of entry behaviour this year in response to the coronavirus (COVID-19) pandemic as well as context to the other analyses to follow.

Taking all qualifications included within the dataset together (Figure 1), one can see that there has been a rise in the total number of grades over time, from 817,803 in 2018, to 902,891 in 2019, to 949,728 in 2020. However, this trend varies according to the different qualification groups and levels, as we shall show in subsections to follow.

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[4] For an explanation of the qualification levels structure, see: https://www.gov.uk/what-different-qualification-levels-mean/list-of-qualification-levels

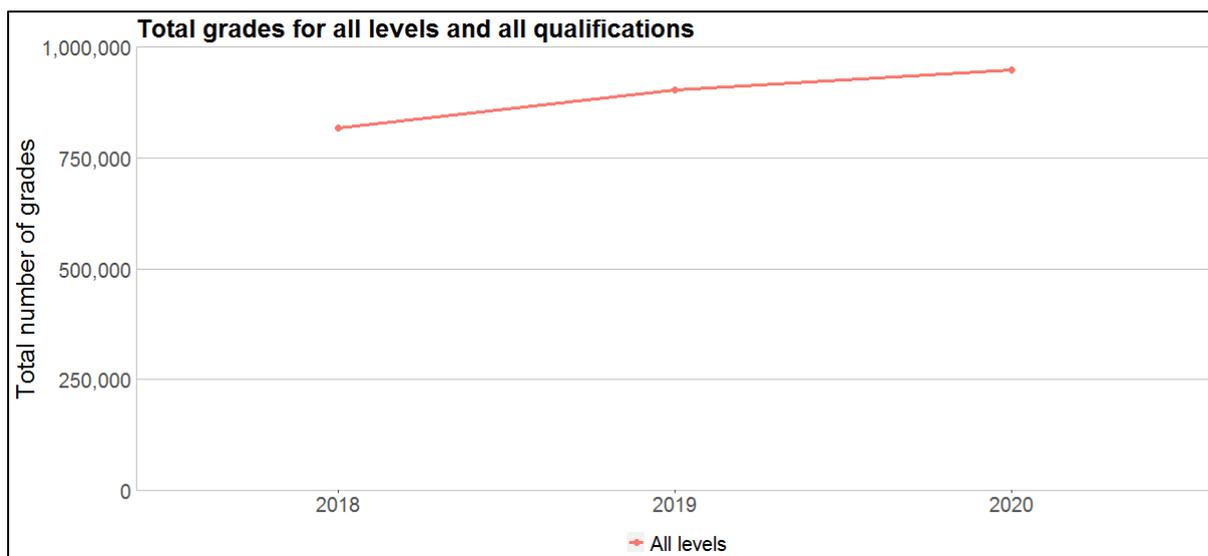**Total grades for all levels and all qualifications**

Figure 1. *Total grades over time for Applied General qualifications, other Performance Table qualifications, Other General qualifications and Functional Skills qualifications (all levels)*

2.1.1 Entry Level qualifications

As shown in Figure 2, there has been a decrease in the total number of Entry Level grades this year, down from 147,724 in 2019 to 108,246 in 2020. When split by qualification type (Figure 3), the same conclusions can be drawn for Entry Level Functional Skills and Other General qualifications, meaning that this effect is not restricted to a particular qualification type. However, the decrease in functional skills appears to be a trend over time whereas for Other General Qualifications, the change seems to be specific to 2020. This could be due to the effects of the restrictions in place because of the coronavirus (COVID-19) pandemic, although other factors could also be possible (e.g. a change in funding arrangements).
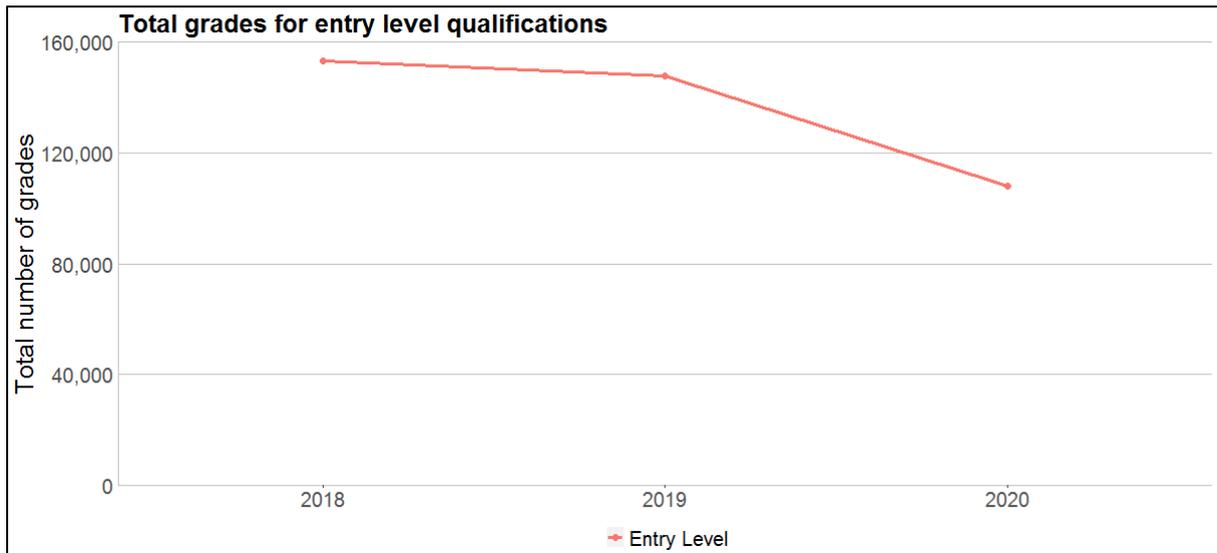
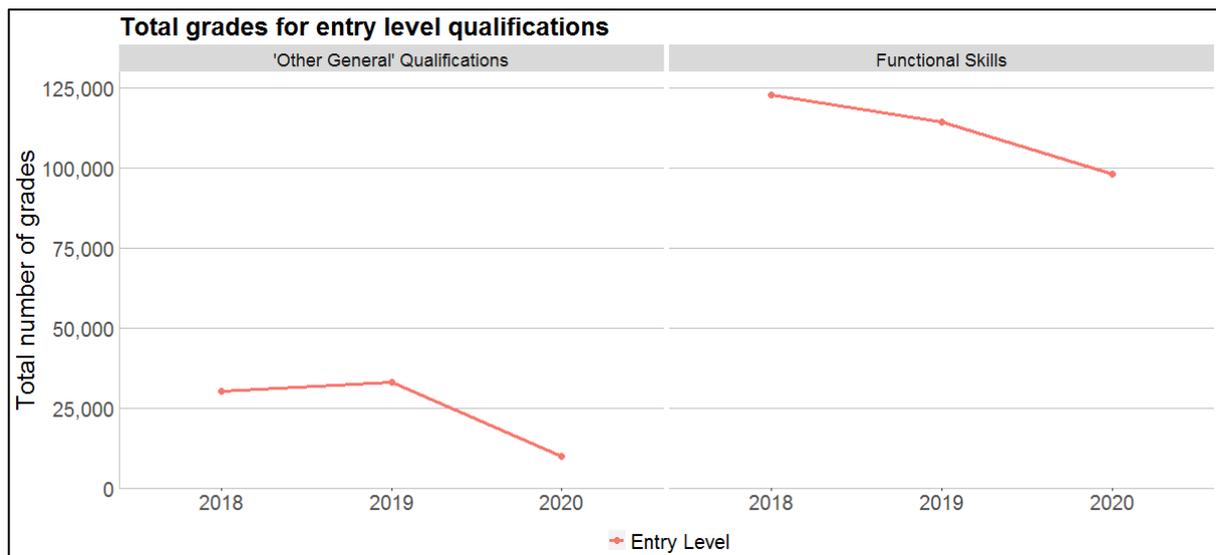Figure 2. *Total grades over time for Entry Level qualifications*

Figure 3. *Total grades over time for Entry Level qualifications by qualification group*

2.1.2 Level 1/2 qualifications

Different conclusions can be drawn for Level 1/2 qualifications. Overall, the total number of grades issued this summer has risen from 513,282 in 2019 to 591,267 in 2020 (Figure 4). However, as shown in Figure 5, this effect is mainly attributable to an increase in entry for Performance Table qualifications. Functional Skills qualifications and Other General qualifications have both been subject to a decrease in entry size this year compared to last. All of these changes appear to be ongoing trends from 2018, rather than being specific to the 2020 situation.
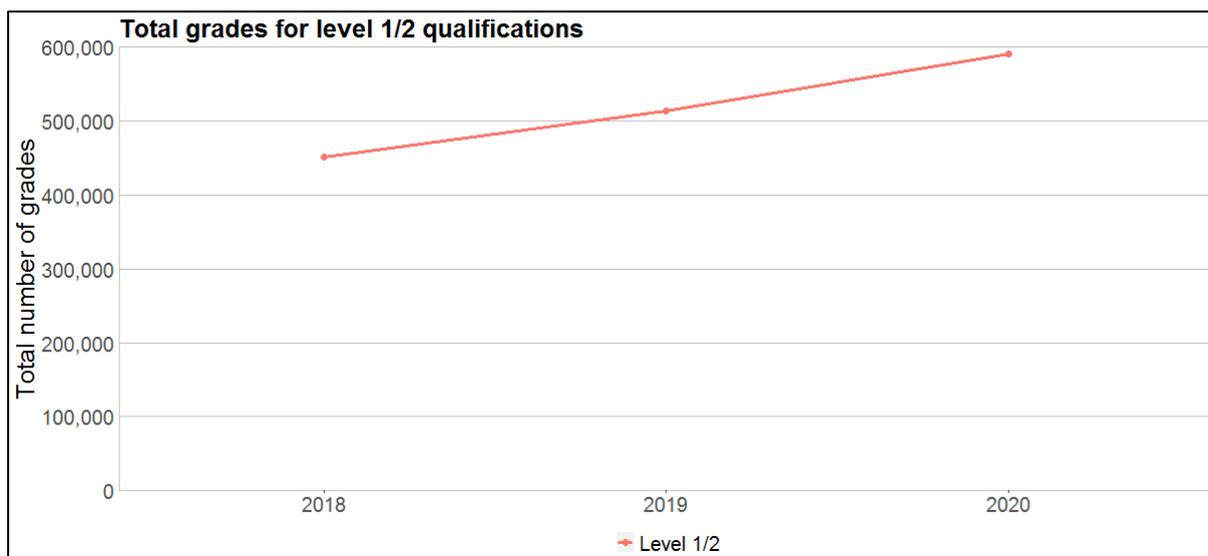
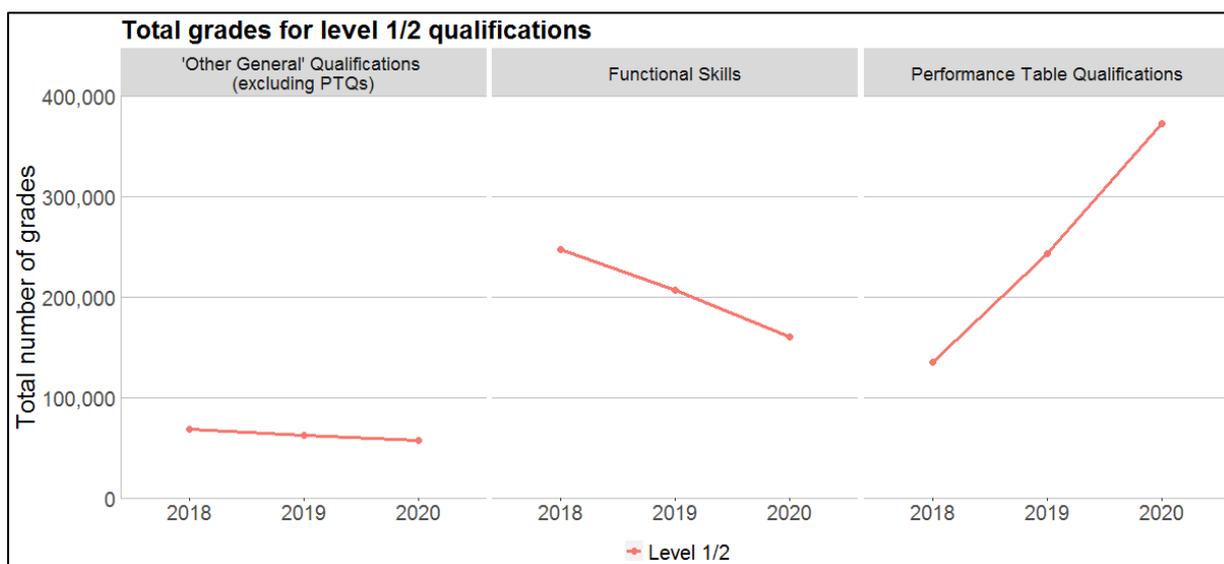Figure 4. *Total grades over time for Level 1/2 qualifications*

Figure 5. *Total grades over time for Level 1/2 qualifications by qualification group*

2.1.3 Level 3 qualifications

Figure 6 shows that there has been an increase in the total number of grades issued for Level 3 qualifications this year, up from 239,806 in 2019 to 260,168 in 2020, continuing a rising trend from 2018.

When this information is broken down into different qualification groupings (Figure 7), one can see that entry numbers for Applied General qualifications have increased this year to a greater extent than between 2018 and 2019. A decrease in entry size was seen for other Performance Table Qualifications (excluding Applied Generals), and the entry size for Other General qualifications has remained broadly the same as last year. As before, while some of these effects may be attributable to the

different processes in place as a response to restrictions because of the coronavirus (COVID-19) pandemic, it is difficult to conclude that with any certainty, as other factors might be at play (e.g. a change in funding arrangements).
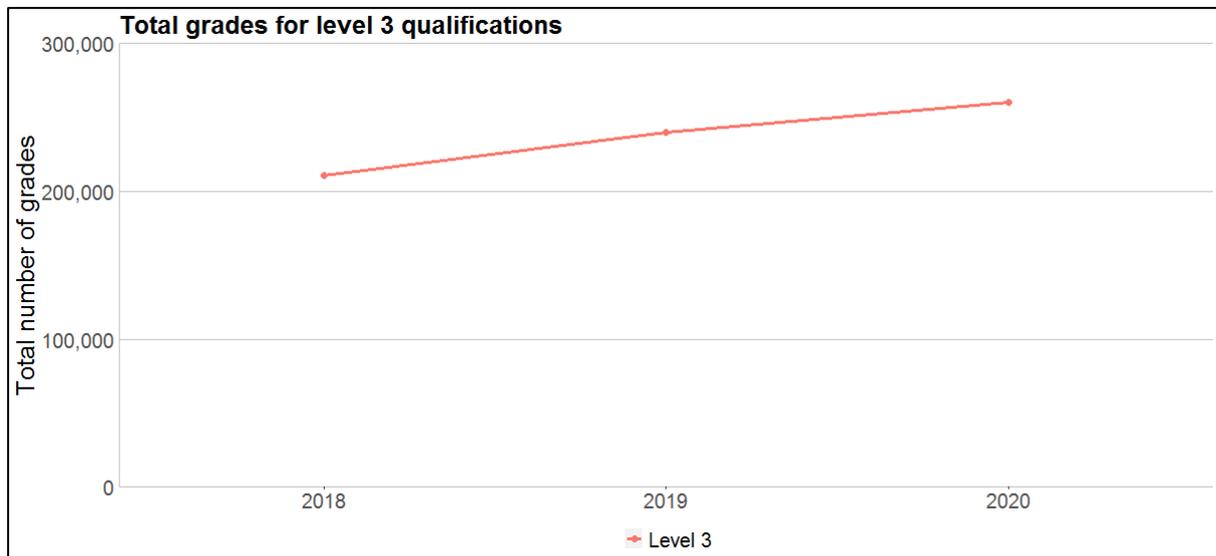

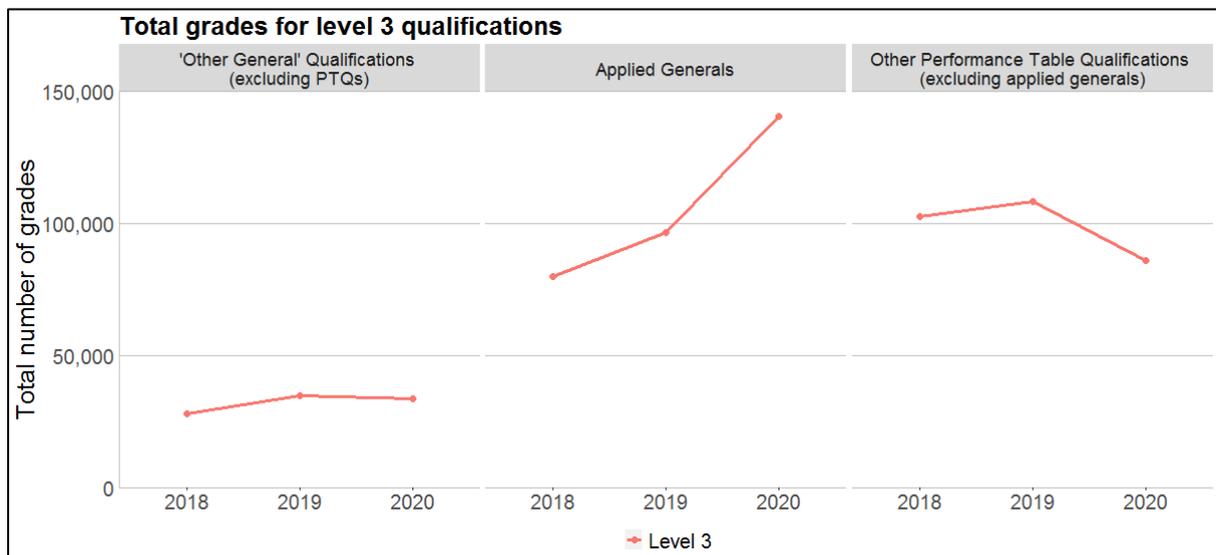Figure 6. *Total grades over time for Level 3 qualifications*

Figure 7. *Total grades over time for Level 3 qualifications by qualification group*

2.1.4 Level 4 Other General qualifications

A decrease in the total number of grades issued can be seen for Level 4 qualifications in Figure 8, continuing the trend seen in previous years. All Level 4 qualifications included in this dataset were Other General qualifications, removing the need for further breakdowns of this information.
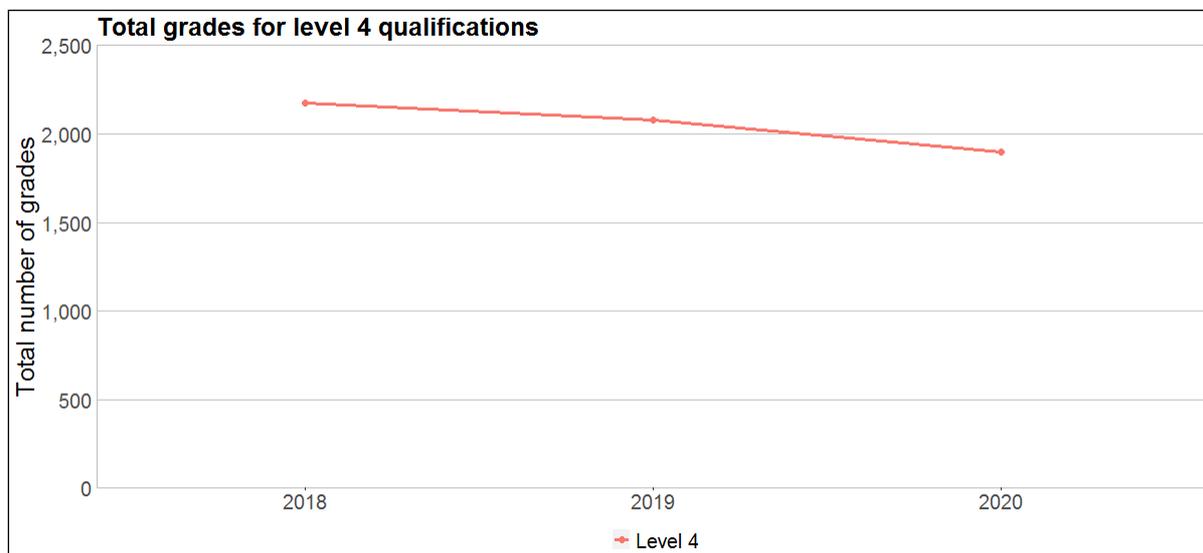

Figure 8. *Total grades over time for Level 4 qualifications*

2.2 Grade distributions over time

The following graphs show the distributions of grades awarded in 2018, 2019 and 2020. The main purpose here is to observe whether the shapes of the distributions look similar in 2020 to previous years. If distributions were skewed in a particular direction, for example, then this might be evidence of a change in standards.

Note that graphs in this section are only plotted for grading structures relating to 5 or more qualifications and 500 or more certifications in 2020. Below these thresholds, we would normally not expect stability in grade distributions over time. No Level 4 qualification structures met this threshold.

Fail grades have been reported where provided by awarding organisations, but it should be noted that not all awarding organisations reported fail grades to us as part of this data collection. For that reason, qualifications which use a simple pass/fail grading structure are also not included in the graphs to follow.

2.2.1 Entry Level qualifications

We focus first on the distributions for Entry Level qualifications at the aggregate level (Figure 9). Again, qualifications essentially using a pass/fail grading structure are not included here as several awarding organisations did not submit fail grades to us, meaning that only qualifications using an Entry 1 / Entry 2 / Entry 3 grading structure are included. As the graph shows, there has been some small change over time, but

this appears to reflect an ongoing trend, rather than being specific to the 2020 situation.
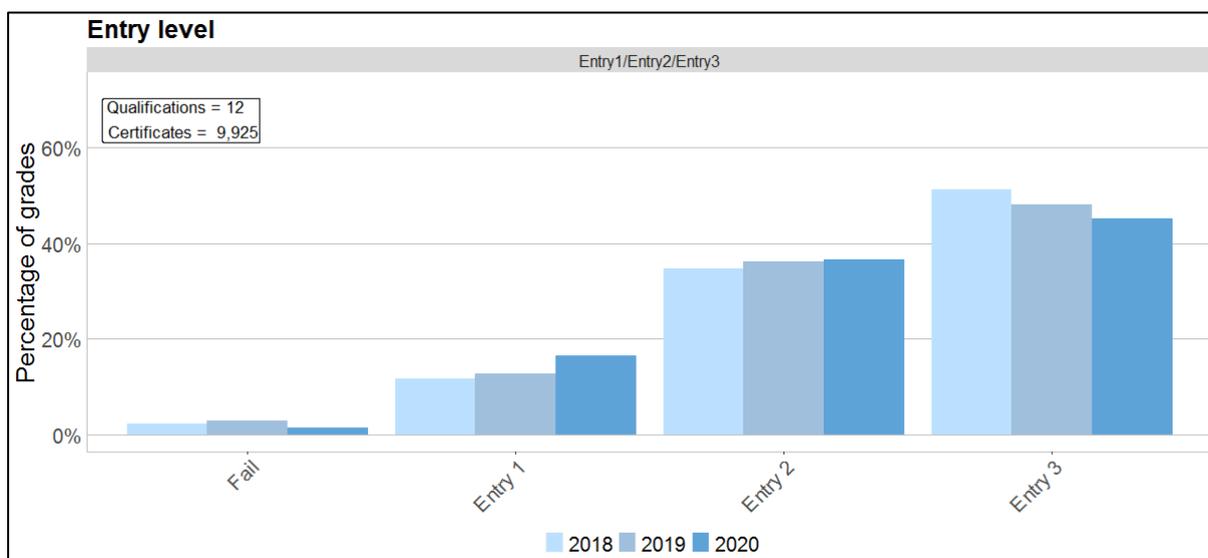

Figure 9. *Grade distributions for Entry Level qualifications*

Note: The numbers of qualifications and certificates given in the text boxes relate to 2020 only. Numbers of certificates have been rounded to the nearest 5.

2.2.2 Level 1/2 qualifications

Unlike in GCSEs, AS and A levels, where the top grade can either be a 9 (in reformed GCSEs) or an A* (in AS and A levels), a larger number of different grading structures are used in the VTQ sector, particularly for Level 1/2 and Level 3 qualifications. We have therefore produced separate plots for each of these different structures. For example, some VTQs are graded on an A* to E scale, others are graded Distinction* to Pass.

When looking at Level 1/2 qualifications overall (Figure 10), all grading structures have seen a change over time. For some structures, these changes appear to reflect ongoing trends over time. For several structures, however, there has been a sudden increase in top grades issued in 2020, relative to previous years. This was largely caused by the reissuing of grades this summer, which saw many grades moved upwards from those originally determined. The fact that some structures saw this increase while others did not simply reflects the types of grading structures used by those qualifications where grades were reissued (not all qualifications were part of this process).

When broken down into different qualification groupings (Figure 11 and Figure 12), these trends are broadly consistent across Performance Table qualifications and Other General qualifications. In other words, these also either show changes reflecting a trend over time or show sudden increases in the number of top grades being issued in 2020.

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Aside from some changes in top grades, it is worth noting that no distributions have substantially different shapes this year compared to previous years. Each distribution has its peak at a generally similar location in the graph, and has a similar degree of skew compared to previous years. Had this not been the case, there may have been some more serious concerns raised over the general reliability of the results being issued.
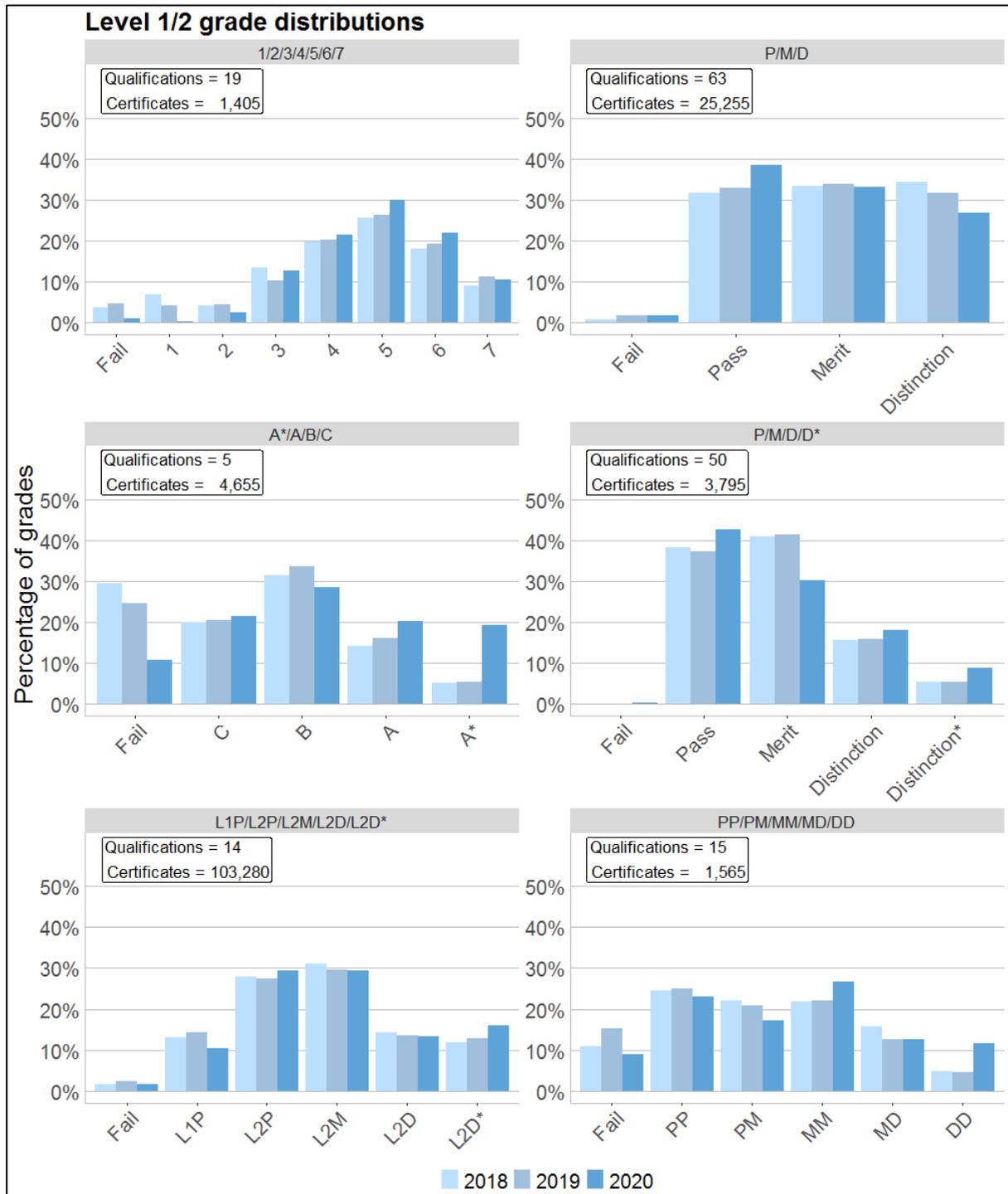

Figure 10. *Grade distributions for Level 1/2 qualifications by grading structure*

Note: The numbers of qualifications and certificates given in the text boxes relate to 2020 only. Numbers of certificates have been rounded to the nearest 5.
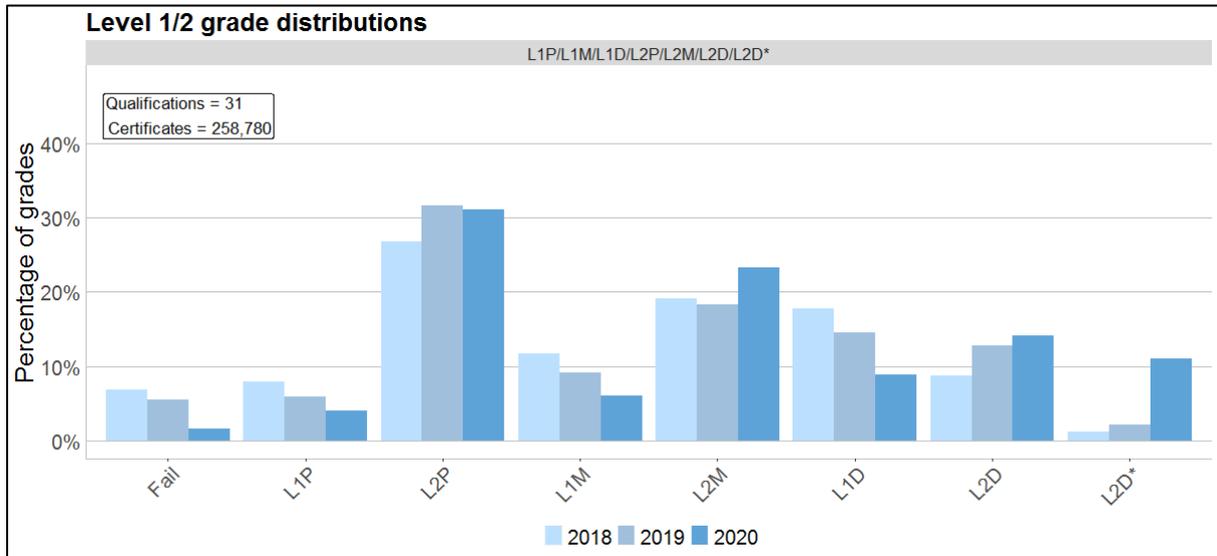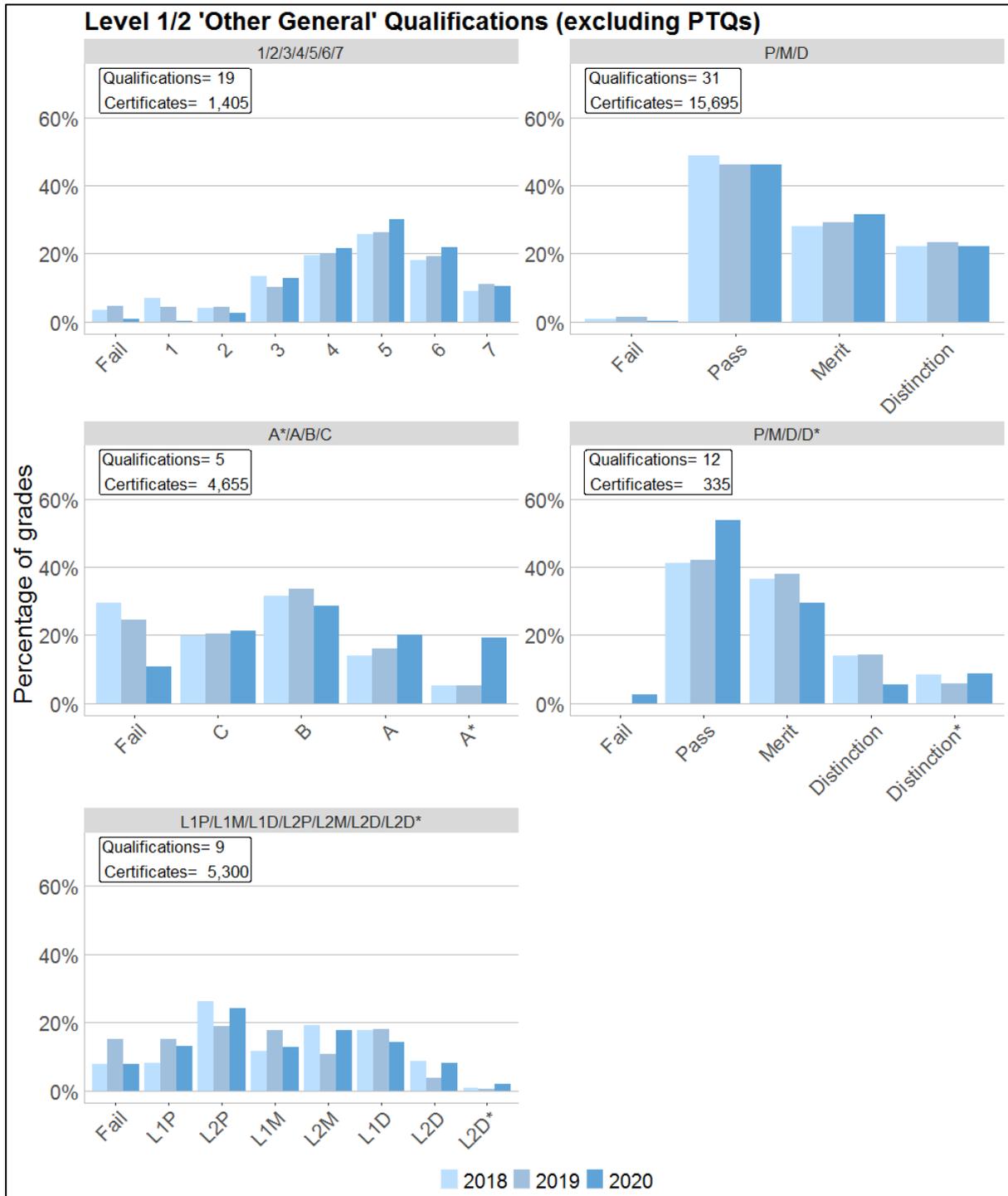

Figure 10 continued.

Figure 11. *Grade distributions for Level 1/2 Other General qualifications by grading structure*

Note: The numbers of qualifications and certificates given in the text boxes relate to 2020 only. Numbers of certificates have been rounded to the nearest 5.

Figure 12. *Grade distributions for Level 1/2 Performance Table qualifications by grading structure*

Note: The numbers of qualifications and certificates given in the text boxes relate to 2020 only. Numbers of certificates have been rounded to the nearest 5.
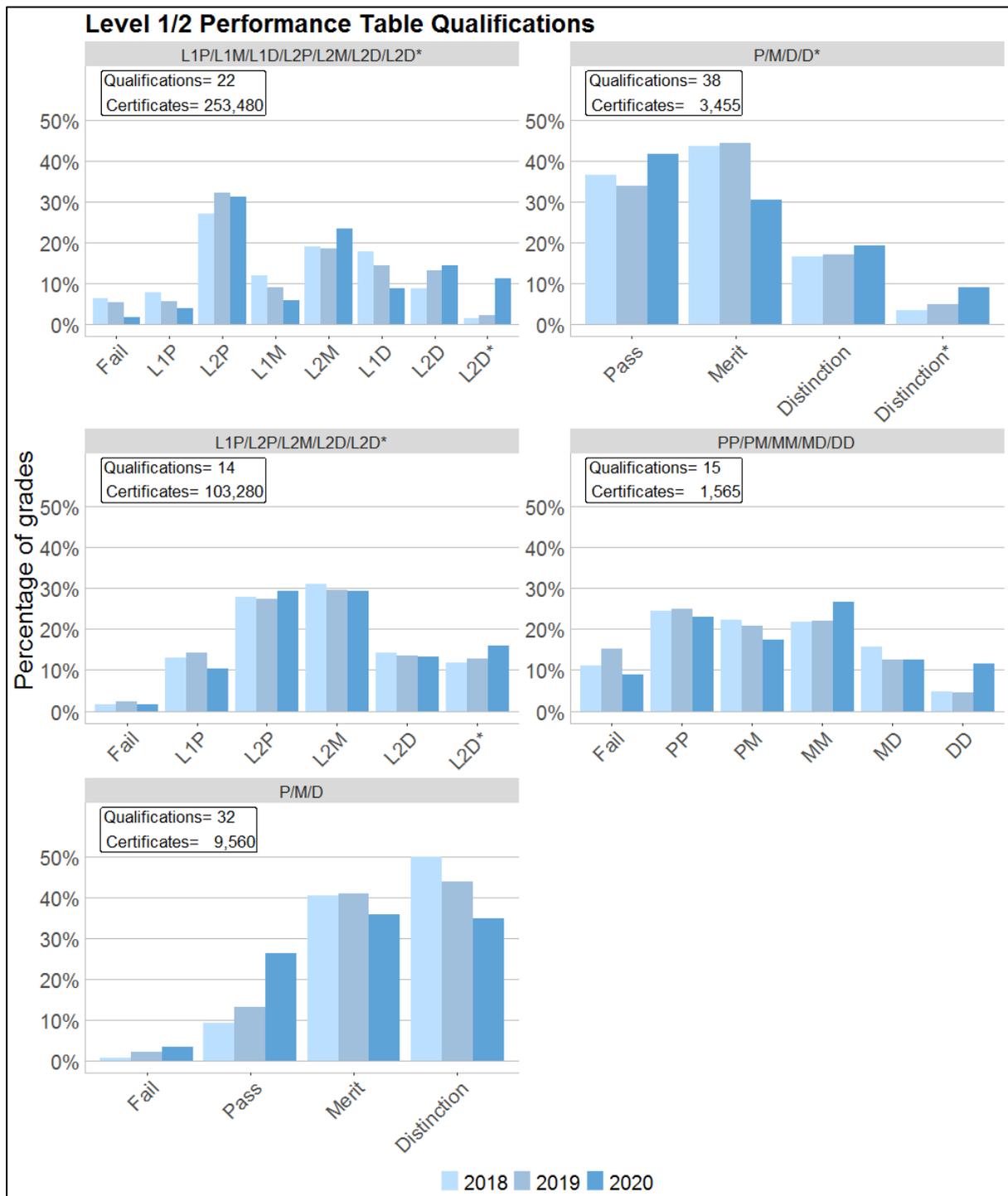
2.2.3 Level 3 qualifications

When the same graphs are plotted for Level 3 qualifications (Figure 13), these again show similar patterns as was observed at Level 1/2. Distributions either do not show much change, show a change reflecting trends over time, or show a sudden increase in top grades in 2020 (largely due to reissuing of grades).

When split by qualification group, most of the sudden increases in top grades become evident particularly for Applied General qualifications (Figure 14), for which many grades were reissued, but some cases can also be seen for other Performance Table qualifications (excluding Applied Generals; Figure 15).

Otherwise, other Performance Table qualifications (Figure 15) and Other General qualifications (Figure 16) either show little change over time or changes appear to reflect ongoing trends.

Other than these changes at top grades, it is again worth noting that the general shapes of distributions do not appear substantially different this year compared to previous years. Again, this therefore does not raise more serious concerns over the general reliability of the results being issued this year.
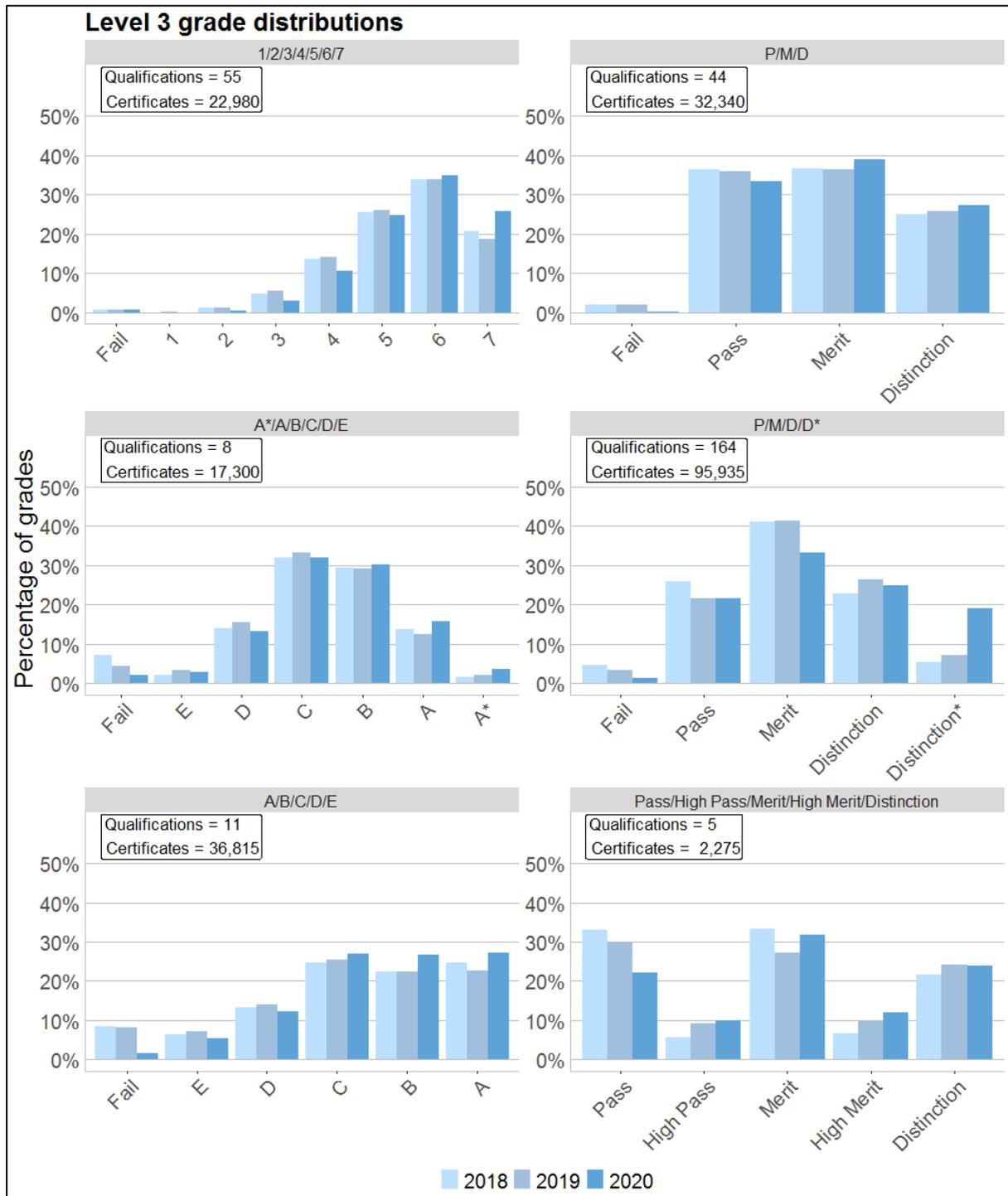
Figure 13. *Grade distributions for Level 3 qualifications by grading structure*

Note: The numbers of qualifications and certificates given in the text boxes relate to 2020 only. Numbers of certificates have been rounded to the nearest 5.

Figure 13 continued.

Figure 14. *Grade distributions for Level 3 Applied General qualifications by grading structure*

Note: The numbers of qualifications and certificates given in the text boxes relate to 2020 only. Numbers of certificates have been rounded to the nearest 5.
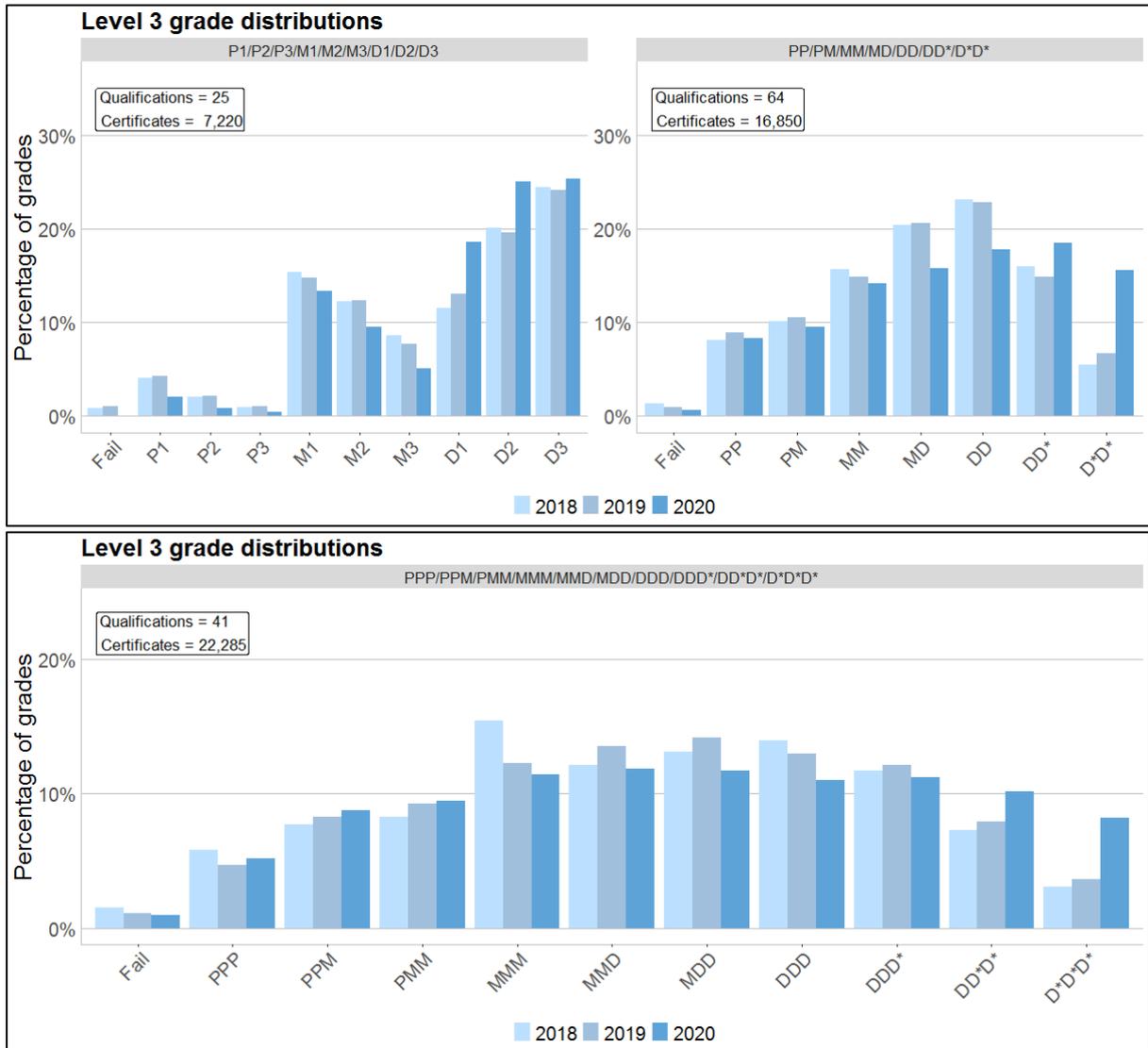
Figure 15. *Grade distributions for other Level 3 PTQs by grading structure*

Note: The numbers of qualifications and certificates given in the text boxes relate to 2020 only. Numbers of certificates have been rounded to the nearest 5.
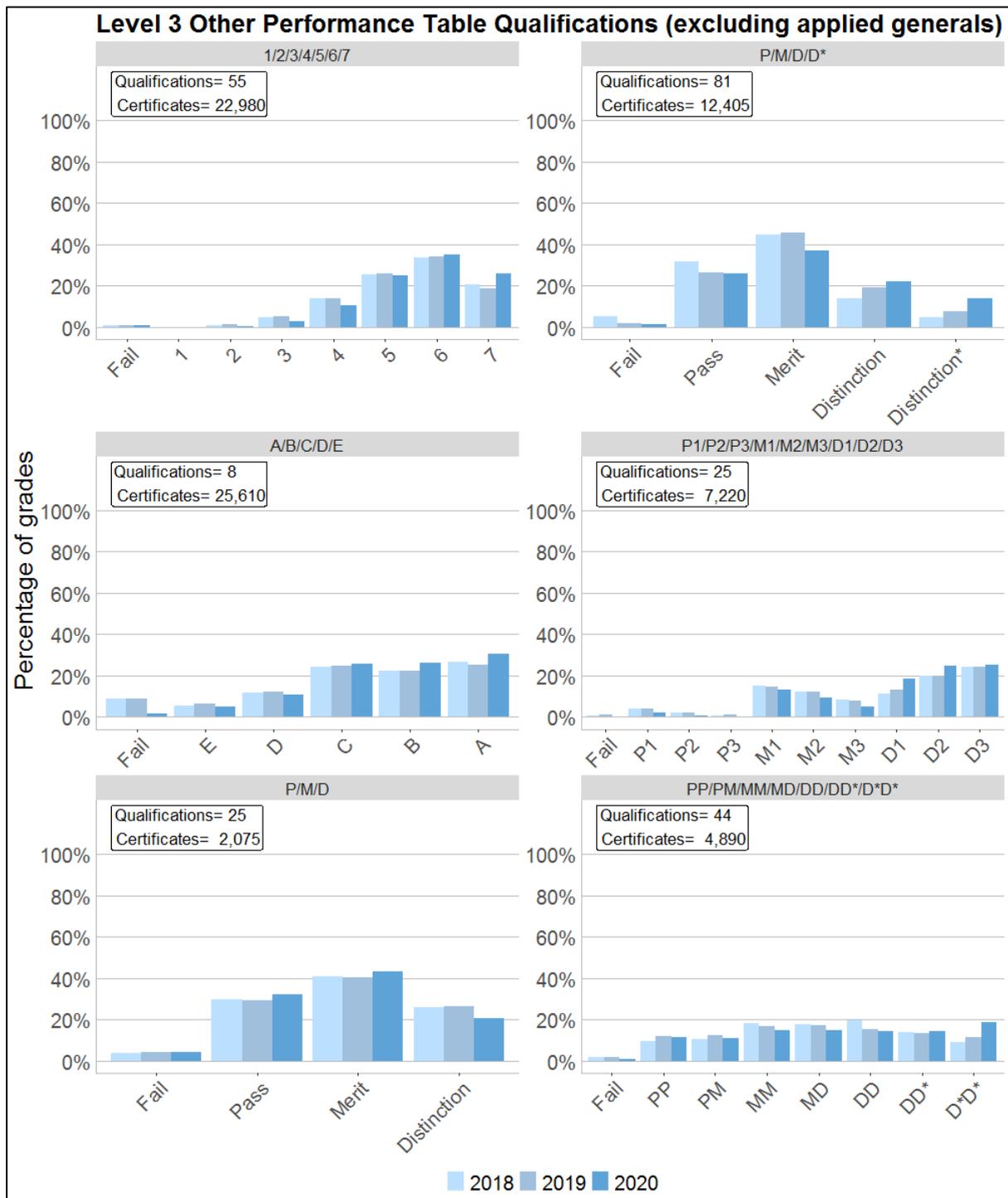
Figure 15 continued.

Figure 16. *Grade distributions for Level 3 Other General qualifications by grading structure*

Note: The numbers of qualifications and certificates given in the text boxes relate to 2020 only. Numbers of certificates have been rounded to the nearest 5.
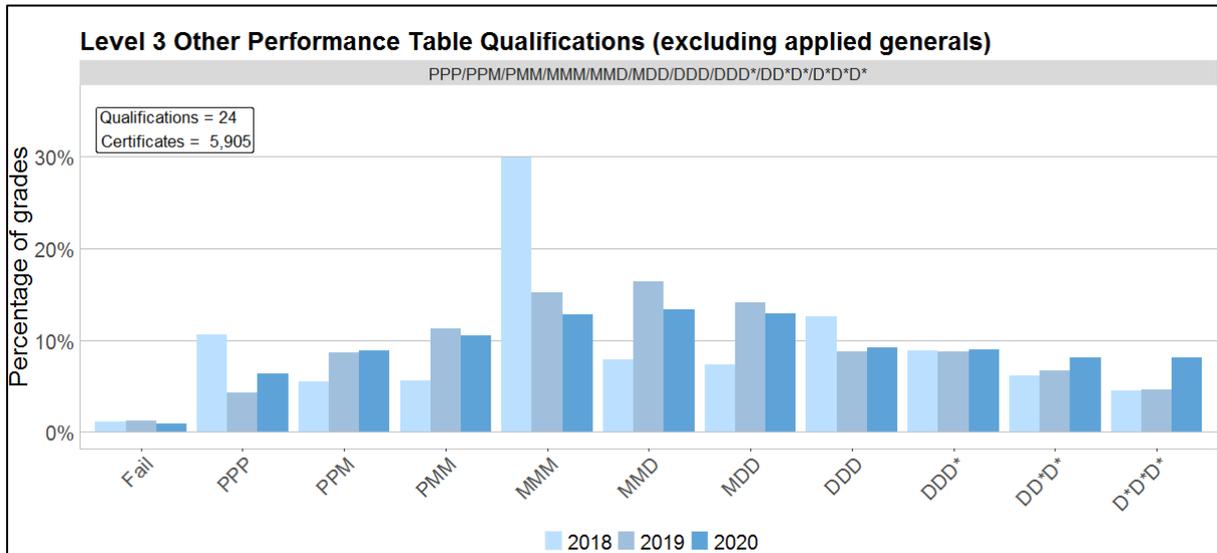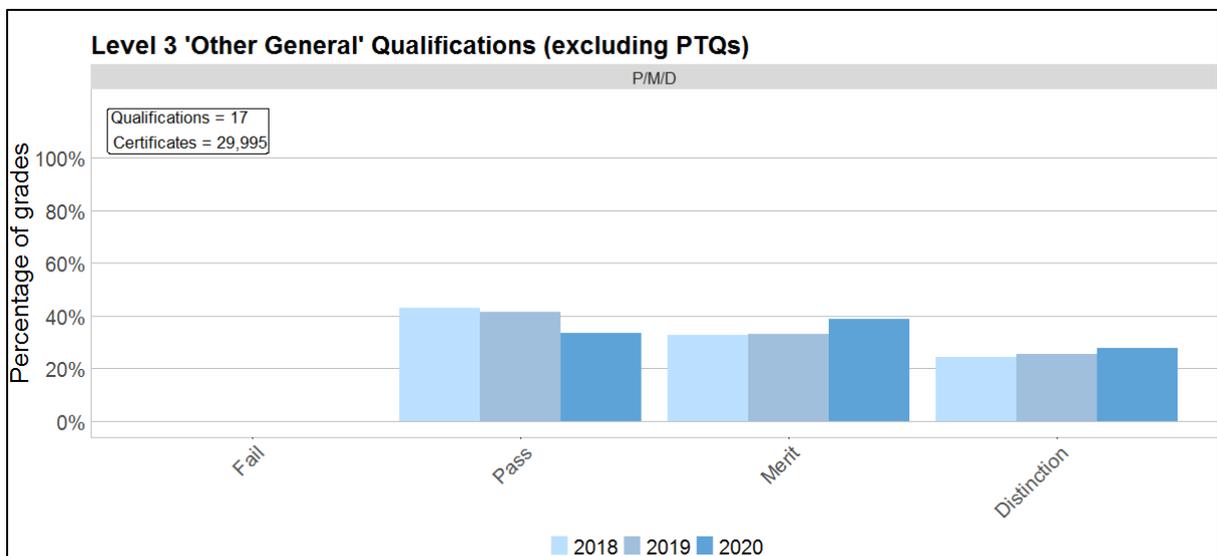
3 Equalities analyses

The aim of this section is to evaluate whether, within the cohort, different demographic/socio-economic groups appear to show different patterns of outcomes compared to previous years.

While there are certain patterns of demographic differences every year, this analysis focuses on whether in 2020 there was any change to these patterns, as it is important that any mitigation approaches adopted in spring/summer 2020 did not exacerbate any of these existing attainment gaps by introducing sudden bias.

While the analyses in the previous section do not suggest standards have changed adversely for whole cohorts of learners, it is also important to assess the same for different groups of learners.

Therefore, to answer Research Question 3 we will:

1. evaluate the impact of demographic and socio-economic characteristics on learners' attainment this year, once other factors are controlled for
2. compare the impact of demographic and socio-economic characteristics on learners' attainment (once other factors are controlled for) across several consecutive years

The general idea is to explore the relationship between the demographic and socio-economic characteristics of learners and their attainment and how it evolved over time. In our analysis we will investigate how the attainment of 'top grades'[5] may differ according to candidate's demographic and socio-economic characteristics. These demographic and socio-economic characteristics include:

- gender: male, female
- Special Education Needs (SEN) status: candidate with/without Special Education Needs, or unknown
- Free School Meals (FSM) eligibility: candidate eligible/not eligible for Free School Meals
- a measure of deprivation known as the Income Deprivation Affecting Children Index (IDACI) score: candidate belongs to one of the following three groups: low, medium or high level of deprivation
- major ethnicity group: white, Asian, black, mixed, Any Other Ethnic Group (AOEG), or unknown

Breakdowns of the frequencies of each of these categories can be found in the appendix. We focus only on Level 1/2 and Level 3 qualifications for these analyses. For Entry Level, because most grades were pass grades – also the top grade – and because few fail grades were present in the dataset, no meaningful analysis could be carried out. For Level 4, the entry size was too small for any meaningful analysis of these groups to be carried out.

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[5] By 'top grades' we mean the highest/best grade that can be achieved in each qualification, which will depend upon the particular grading structure that has been adopted.

3.1 Regression analysis and reporting

Analyses were based upon a logistic regression method. Through this, we were able to explore the effect of each demographic/socio-economic characteristic, when all the other factors were held fixed. The logistic regression specification takes the form:

$$log \frac{P(Y_{ij} = 1)}{1 - P(Y_{ij} = 1)} = \alpha + \beta X_i + \gamma Z_i + c_j$$

where:

- $P(Y_{ij} = 1)$ is the dependant variable. It determines the probability of achieving a top grade for candidate *i* at centre *j*
- X_i is a set of independent variables summarising the demographic and socio-economic characteristics of the candidate (see list of variables described above)
- Z_i is the highest level of prior attainment of candidate *i*. It is an additional variable that is controlled for in the logistic regression analysis
- c_j is a random effect determined by centre-level characteristics. It is also an additional variable that is controlled for in the logistic regression analysis
- α, β, γ are the regression coefficients

Within the above logistic regression specification, it is the estimate of the parameter β giving the relationship between each demographic/socio-economic characteristic and the dependant variable that is of most interest. A further breakdown of characteristics and multi-way interactions between the demographic and socio-economic variables listed above were not included in the analysis. This is because significantly smaller size groups would have led to unreliable findings.

The impact of demographic and socio-economic characteristics on achieving top grades is reported in the graphs and tables below (and also in the appendix). For each year separately, these show a measure of effect size of each variable on achieving top grades. This is expressed in the form of 'odds ratios', representing the ratio of the odds of achieving a top grade between two categories of a demographic / socio-economic characteristic.

Odds are defined as the probability that an event will happen (e.g., a learner achieving top grades) over the probability that it won't happen. For example, if 10 learners achieve top grades out of 100 (meaning 90 learners did not achieve top grades), the odds of getting top grades would be one to nine (10 / 90).

An odds ratio, therefore, might be the odds of achieving a top grade for males over the odds of achieving a top grade for females. An odds ratio greater than 1 indicates greater odds relative to the reference category. An odds ratio less than 1 implies lower odds relative to the reference category. Through these measures, we can assess the difference in relative attainment between different demographic groups.

To give an example, an odds ratio of 0.58 would imply that the odds for males are 42% lower (using the formula: (1- 0.58) x 100) than are the odds for females. Note that this is not the same as saying that males are 42% less likely to achieve top grades than females. Instead, it implies that if 20 female learners achieved the top grade and 100 did not, then approximately 12 (20 x 0.58) male learners would achieve the top grade and 100 males would not achieve the top grade.

The different reference categories are as follows: males are compared to females, minority ethnicity learners are compared to white ethnicity learners, learners with SEN or FSM eligibility are compared to learners without SEN or FSM eligibility and medium and high IDACI score learners are compared to low IDACI score learners.[6]

In both the tables and the graphs, confidence intervals are also reported (inside brackets in the tables and as horizontal lines around points in the graphs). Confidence intervals show the degree of possible error around the estimates, giving a range of plausible values rather than a definitive value.

By comparing values between years one can observe how these differences have changed over time. If the values in 2020 appear to be substantially different from the values in 2018 and/or 2019, then this might indicate that the attainment differences between different demographic groups have changed this year compared to the previous 2 years.

As mentioned above, attainment differences between demographic groups may be expected in any given year, but the purpose of these analyses is to assess whether or not those attainment differences appear to have been suddenly exacerbated this year as a result of coronavirus (COVID-19) pandemic mitigations.

As mentioned previously, these particular analyses were conducted only on the sample of learners for whom matching records were identified in the ILR dataset. While there is no reason to assume that this sample would necessarily be biased in any way, this is a potential limitation of these analyses. Nevertheless, sample sizes used are large enough to make the results meaningful.

3.2 Top grades over time for Level 1/2 qualifications

As before, we use the term 'Level 1/2 qualifications' to refer to the collection of qualifications offered at Level 1, Level 1/2, and Level 2.

Figure 17 shows the results of the logistic regression analysis as described above (also see Table 1). While some changes between years are suggested for some categories, the overlapping confidence intervals giving the range of plausible values suggest that these changes are not statistically significant. In other words, the results suggest that the attainment gaps have not changed in a statistically significant manner between years with regards to ethnicity or levels of deprivation. This supports the overall fairness of awarding in 2020.

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[6] Higher IDACI scores mean learners were living in areas with greater levels of deprivation. Lower scores indicate lower deprivation.

However, it is worth noting that the sample sizes are smaller in 2020 relative to previous years (numbers are given in the appendix), which means the confidence intervals are therefore relatively wide.

Two statistically significant changes do exist, however. Firstly, males are less likely than females to achieve top grades in 2020 relative to 2019, though the difference has returned to levels similar to 2018. This suggests that the change, while statistically significant, may be natural fluctuation over time.

The other significant change is for the 'SEN: Unknown' category, suggesting that the attainment gap has reduced between this group and learners without special education needs. However, as 'SEN: Unknown' in this instance simply means that the special educational needs status of these learners has not been recorded/reported, it is difficult to draw any meaningful conclusion from this finding.

When qualification groups are plotted separately, many changes again appear not to be statistically significant (Figure 18, Table 2), with some exceptions. Firstly, for Other General qualifications, the attainment gap between males and females appears to have increased over time to a small, with males becoming less likely over time to achieve top grades in those qualifications than females. However, this does appear to be a small ongoing trend, rather than being specific to the 2020 situation.

Secondly, the attainment gap between learners eligible for free school meals and those not eligible has possibly disappeared this year compared to last year in Performance Table qualifications. Previously, learners eligible for free school meals were less likely to achieve top grades than those not eligible[7]. However, the wide confidence intervals here (due to small sample sizes) limits our surety of this finding.

There is again a significant change for the 'SEN: Unknown' category for other Performance Table qualifications but, as above, it is difficult to draw anything meaningful from this.

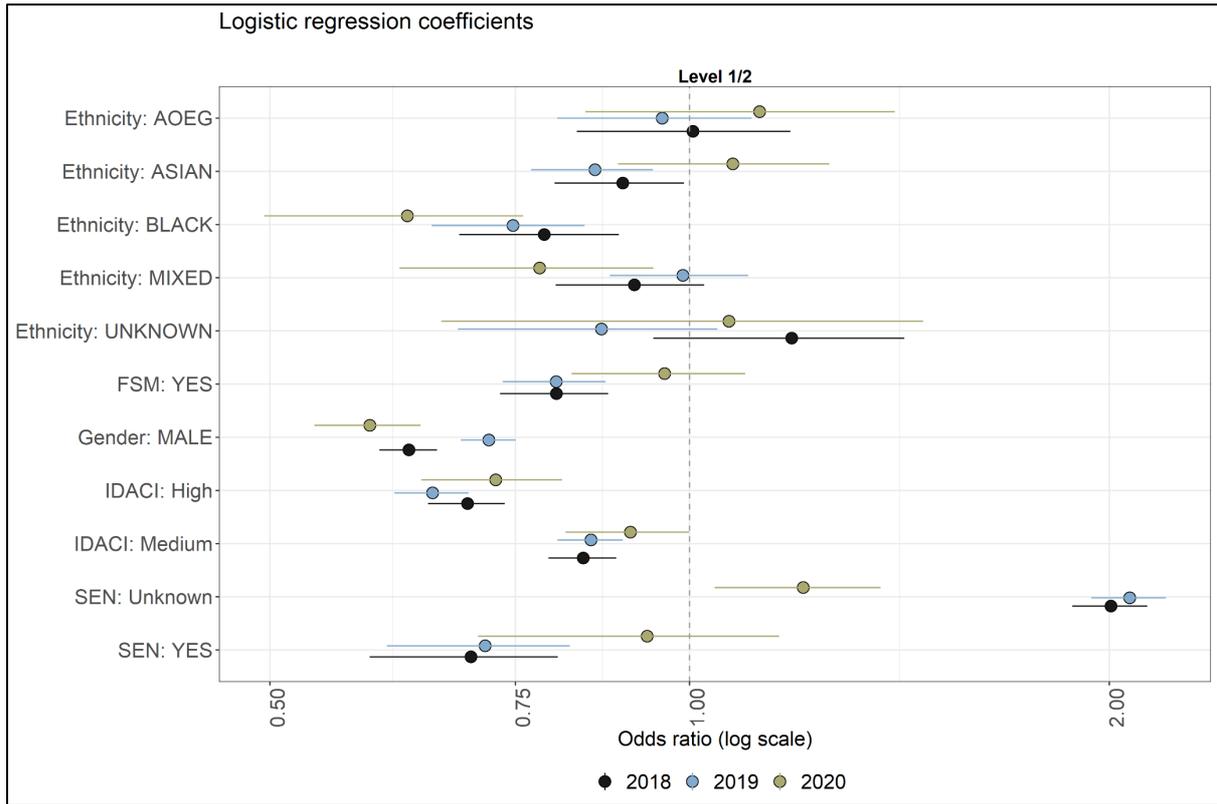[7] Free school meal eligibility is often used as an indication of a level of deprivation.

Figure 17. *Equalities analysis for Level 1/2 qualifications*

Note: The vertical dashed line shows the point at which one can say that there is no difference in the odds of achieving top grades between the category being observed and the reference category.

Table 1. Odds ratios for the impact of demographic and socio-economic characteristics on achieving the top grade - Level 1/2 qualifications

Factor	2018		2019		2020	
	Estimate	CI	Estimate	CI	Estimate	CI
Gender: Male	0.63	(0.60, 0.66)	0.72	(0.69, 0.75)	0.59	(0.54, 0.64)
Ethnicity: ASIAN	0.90	(0.80, 0.99)	0.86	(0.77, 0.94)	1.07	(0.89, 1.26)
Ethnicity: BLACK	0.79	(0.68, 0.89)	0.75	(0.65, 0.84)	0.63	(0.50, 0.76)
Ethnicity: MIXED	0.91	(0.80, 1.02)	0.99	(0.88, 1.1)	0.78	(0.62, 0.94)
Ethnicity: AOEG	1.01	(0.83, 1.18)	0.96	(0.80, 1.11)	1.12	(0.84, 1.40)
Ethnicity: Unknown	1.18	(0.94, 1.43)	0.86	(0.68, 1.05)	1.07	(0.66, 1.47)
SEN: YES	0.70	(0.59, 0.80)	0.71	(0.61, 0.82)	0.93	(0.71, 1.16)
SEN: Unknown	2.01	(1.88, 2.13)	2.07	(1.94, 2.20)	1.21	(1.04, 1.37)
FSM: YES	0.80	(0.73, 0.87)	0.80	(0.73, 0.87)	0.96	(0.82, 1.10)
IDACI: MEDIUM	0.84	(0.79, 0.89)	0.85	(0.80, 0.90)	0.91	(0.81, 1.00)
IDACI: HIGH	0.69	(0.65, 0.74)	0.65	(0.61, 0.69)	0.73	(0.64, 0.81)
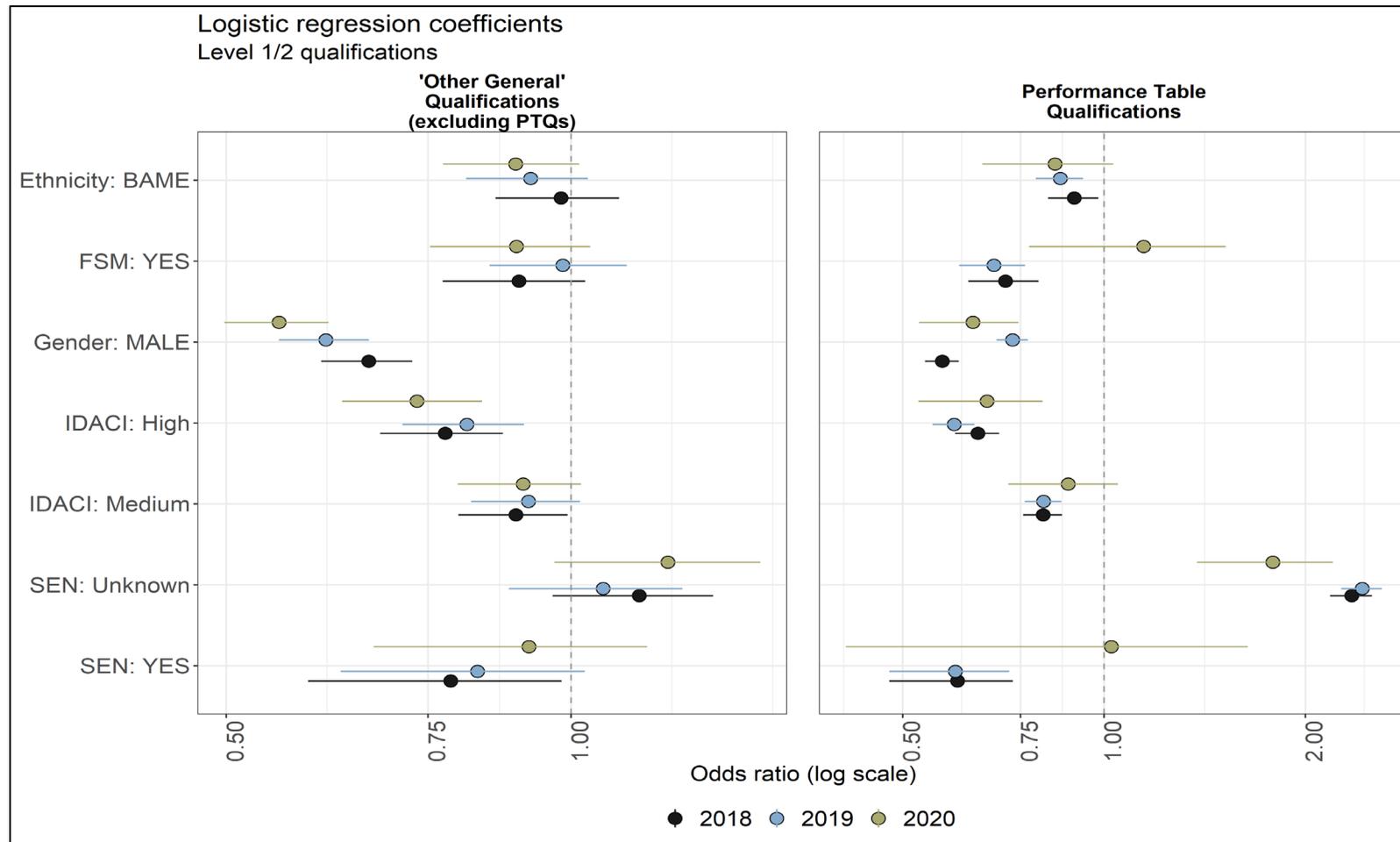
Figure 18. *Equalities analysis for Level 1/2 qualifications by group*

Notes: The vertical dashed line shows the point at which one can say that there is no difference in the odds of achieving top grades between the category being observed and the reference category. Due to small numbers, minority ethnicities have been grouped under one heading: 'black and minority ethnicity' (BAME); and are still compared to white ethnicity learners.

Table 2. Odds ratios for the impact of demographic and socio-economic characteristics on achieving the top grade - Level 1/2 qualifications by group

Qualification group	Factor	2018		2019		2020	
		Estimate	CI	Estimate	CI	Estimate	CI
'Other General' Qualifications (excluding PTQs)	Gender: Male	0.67	(0.61, 0.73)	0.61	(0.56, 0.67)	0.56	(0.50, 0.61)
	Ethnicity: BAME	0.98	(0.86, 1.10)	0.92	(0.81, 1.03)	0.89	(0.77, 1.02)
	SEN: YES	0.79	(0.59, 0.98)	0.83	(0.63, 1.03)	0.92	(0.67, 1.17)
	SEN: Unknown	1.15	(0.96, 1.33)	1.07	(0.88, 1.25)	1.22	(0.97, 1.46)
	FSM: YES	0.90	(0.77, 1.03)	0.98	(0.85, 1.12)	0.90	(0.75, 1.04)
	IDACI: MEDIUM	0.90	(0.80, 0.99)	0.92	(0.82, 1.02)	0.91	(0.80, 1.02)
	IDACI: HIGH	0.78	(0.68, 0.87)	0.81	(0.71, 0.91)	0.73	(0.63, 0.84)
Performance Table Qualifications	Gender: Male	0.57	(0.54, 0.61)	0.73	(0.69, 0.77)	0.64	(0.53, 0.74)
	Ethnicity: BAME	0.90	(0.82, 0.98)	0.86	(0.79, 0.93)	0.84	(0.66, 1.03)
	SEN: YES	0.60	(0.48, 0.73)	0.60	(0.48, 0.72)	1.03	(0.41, 1.64)
	SEN: Unknown	2.35	(2.18, 2.52)	2.43	(2.26, 2.60)	1.79	(1.38, 2.20)
	FSM: YES	0.71	(0.63, 0.80)	0.68	(0.61, 0.76)	1.15	(0.77, 1.52)
	IDACI: MEDIUM	0.81	(0.76, 0.87)	0.81	(0.76, 0.86)	0.88	(0.72, 1.05)
	IDACI: HIGH	0.65	(0.60, 0.70)	0.60	(0.55, 0.64)	0.67	(0.53, 0.81)

3.3 Top grades over time for Level 3 qualifications

The results of the regression for Level 3 qualifications overall are reported in Figure 19 and Table 3. Most changes are again non-statistically significant, as suggested by the overlapping confidence intervals giving the range of plausible values, with 2 exceptions.

Firstly, findings suggest that the attainment gap between males and females has become larger this year relative to previous years. However, while this may look dramatic on the graph, this change between years is relatively small in real terms. By comparing the coefficients, we can say that if for every 100 females who did not achieve top grades there were 20 females who achieved top grades in both 2019 and 2020, then for every 100 males who did not achieve top grades there would be 11 (20 x 0.56) males who achieved top grades in 2020 compared to 14 (20 x 0.68) in 2019.

This makes a difference across years of 3 learners for every 100 learners who did not achieve top grades in such a scenario. It is difficult to know what the cause of these changes might be and there may be multiple possible explanations, including a genuine change in the ability of cohorts of male and female learners between years, which may not be captured by the highest level of prior attainment variable[8].

Secondly, the 'SEN: Unknown' category of learners again changed in their likelihood of achieving top grades relative to learners with no special educational needs. As before, it is unclear what exactly might be learnt from this.

When the analysis was repeated on different groups of qualifications (Figure 20, Table 4), the increase in attainment gap between males and females in 2020 is not evident in Applied General qualifications but is evident in Other General and other Performance Table qualifications. Other changes are again non-significant.

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[8] This variable only shows the highest qualification level achieved, which may not be an accurate measure of ability. In particular, we do not have information on the actual grades achieved in any prior learning.
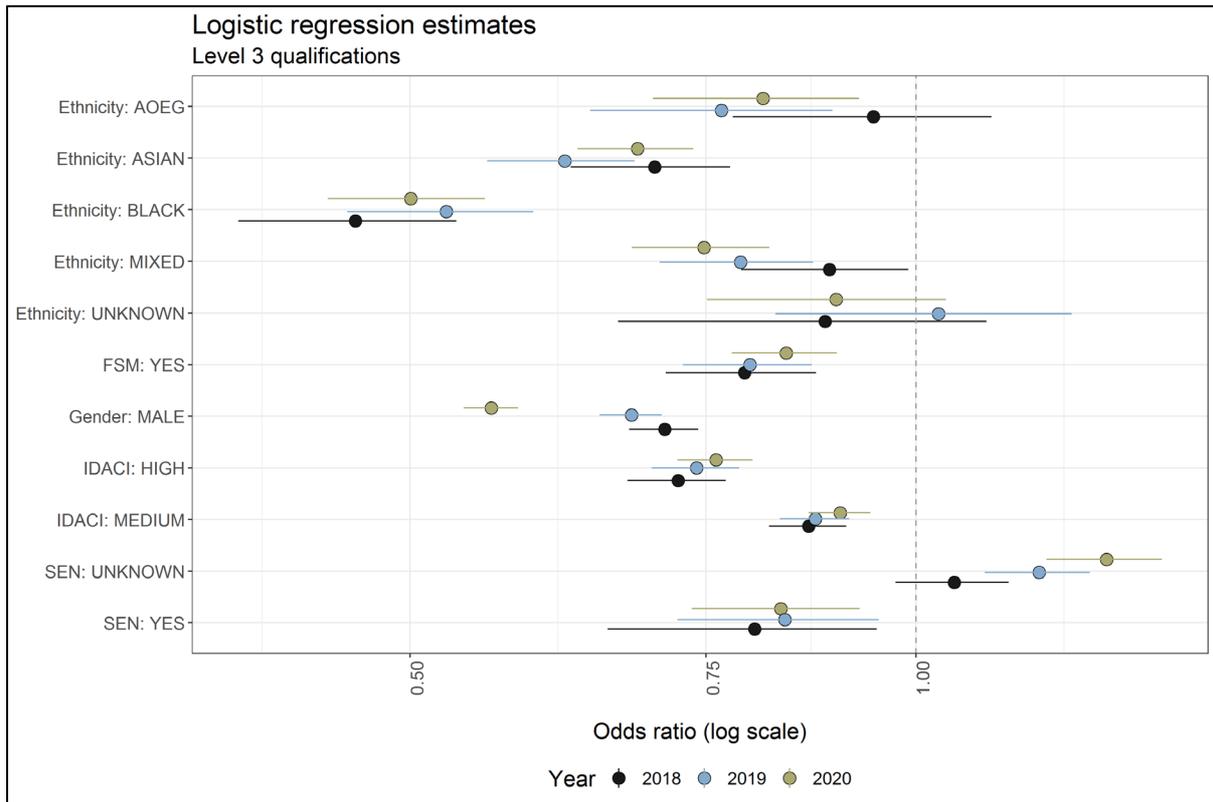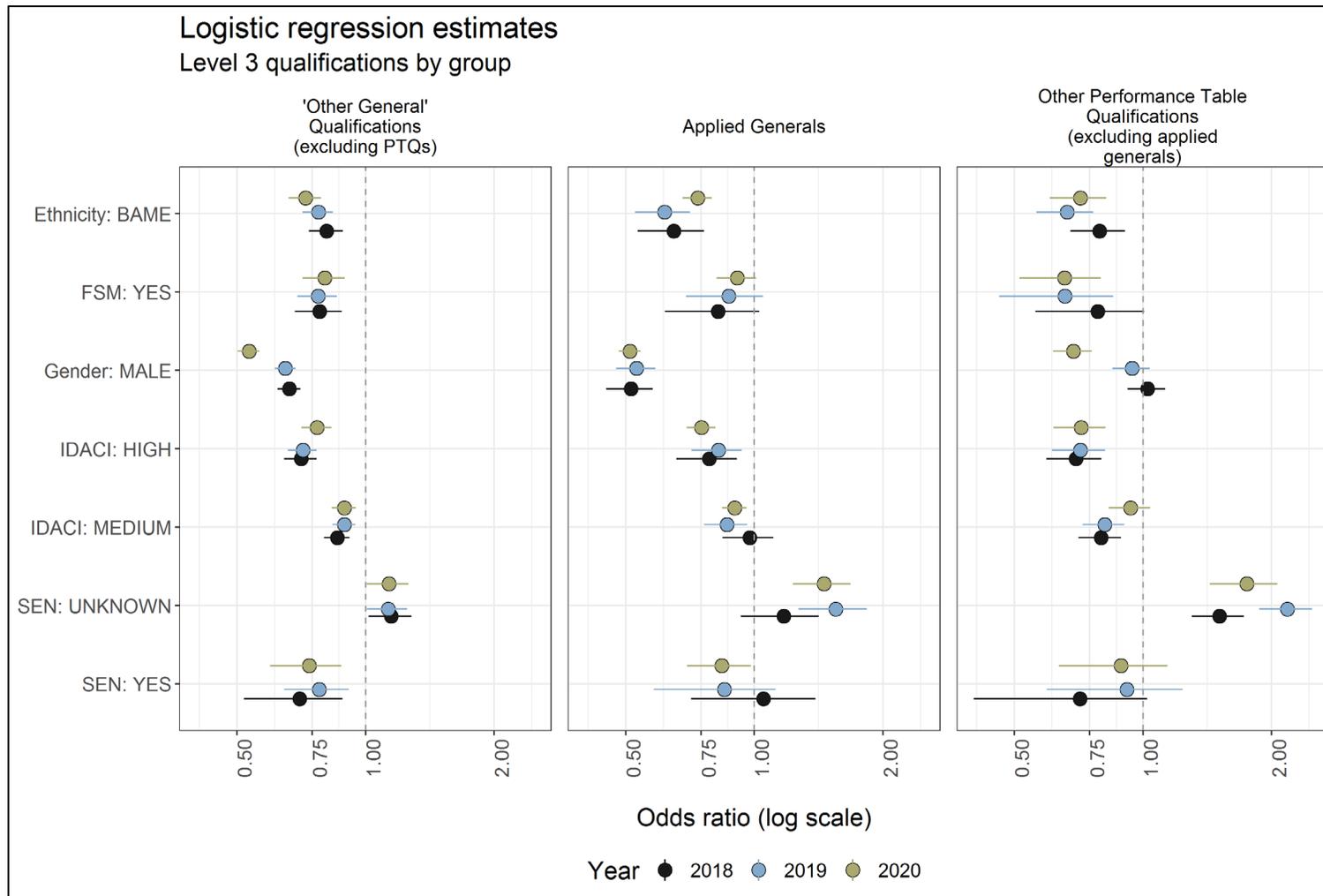
Figure 19. *Equalities analysis for Level 3 qualifications*

Note: The vertical dashed line shows the point at which one can say that there is no difference in the odds of achieving top grades between the category being observed and the reference category.

Table 3. Odds ratios for the impact of demographic and socio-economic characteristics on achieving the top grade - Level 3 qualifications

Factor	2018		2019		2020	
	Estimate	CI	Estimate	CI	Estimate	CI
Gender: Male	0.71	(0.68, 0.74)	0.68	(0.65, 0.71)	0.56	(0.54, 0.58)
Ethnicity: ASIAN	0.70	(0.62, 0.78)	0.62	(0.56, 0.68)	0.68	(0.63, 0.74)
Ethnicity: BLACK	0.46	(0.40, 0.53)	0.53	(0.46, 0.59)	0.50	(0.45, 0.55)
Ethnicity: MIXED	0.89	(0.79, 0.99)	0.79	(0.70, 0.87)	0.75	(0.68, 0.82)
Ethnicity: AOEG	0.94	(0.78, 1.11)	0.77	(0.64, 0.89)	0.81	(0.70, 0.92)
Ethnicity: Unknown	0.88	(0.66, 1.10)	1.03	(0.82, 1.24)	0.90	(0.75, 1.04)
SEN: YES	0.80	(0.66, 0.95)	0.84	(0.72, 0.95)	0.83	(0.74, 0.93)
SEN: Unknown	1.05	(0.97, 1.14)	1.18	(1.10, 1.27)	1.30	(1.20, 1.40)
FSM: YES	0.79	(0.71, 0.87)	0.80	(0.73, 0.87)	0.84	(0.78, 0.9)
IDACI: MEDIUM	0.86	(0.82, 0.91)	0.87	(0.83, 0.91)	0.90	(0.86, 0.94)
IDACI: HIGH	0.72	(0.67, 0.77)	0.74	(0.7, 0.78)	0.76	(0.72, 0.80)

Figure 20. *Equalities analysis for Level 3 qualifications by group*

Notes: The vertical dashed line shows the point at which one can say that there is no difference in the odds of achieving top grades between the category being observed and the reference category. Due to small numbers, minority ethnicities have been grouped under one heading: 'black and minority ethnicity' (BAME); and are still compared to white ethnicity learners.

Table 4. Odds ratios for the impact of demographic and socio-economic characteristics on achieving the top grade - Level 3 qualifications by group

Qualification group	Factor	2018		2019		2020	
		Estimate	CI	Estimate	CI	Estimate	CI
'Other General' Qualifications (excluding PTQs)	Gender: Male	0.66	(0.62, 0.07)	0.65	(0.61, 0.69)	0.53	(0.50, 0.56)
	Ethnicity: BAME	0.81	(0.74, 0.88)	0.78	(0.71, 0.84)	0.72	(0.66, 0.79)
	SEN: YES	0.70	(0.52, 0.88)	0.78	(0.64, 0.91)	0.74	(0.60, 0.88)
	SEN: Unknown	1.15	(1.02, 1.28)	1.13	(1.01, 1.25)	1.13	(1.01, 1.26)
	FSM: YES	0.78	(0.68, 0.88)	0.77	(0.69, 0.86)	0.80	(0.71, 0.89)
	IDACI: MEDIUM	0.86	(0.8, 0.92)	0.89	(0.84, 0.95)	0.89	(0.83, 0.95)
	IDACI: HIGH	0.71	(0.64, 0.77)	0.71	(0.66, 0.77)	0.77	(0.71, 0.83)
Applied Generals	Gender: Male	0.51	(0.45, 0.58)	0.53	(0.47, 0.59)	0.51	(0.48, 0.54)
	Ethnicity: BAME	0.65	(0.53, 0.76)	0.62	(0.53, 0.71)	0.74	(0.68, 0.8)
	SEN: YES	1.05	(0.71, 1.39)	0.85	(0.58, 1.12)	0.84	(0.70, 0.98)
	SEN: Unknown	1.17	(0.93, 1.41)	1.55	(1.27, 1.83)	1.46	(1.23, 1.68)
	FSM: YES	0.82	(0.62, 1.03)	0.87	(0.69, 1.05)	0.91	(0.82, 1.01)
	IDACI: MEDIUM	0.98	(0.84, 1.11)	0.86	(0.76, 0.96)	0.90	(0.84, 0.96)
	IDACI: HIGH	0.78	(0.66, 0.91)	0.82	(0.71, 0.93)	0.75	(0.69, 0.81)
Other Performance Table Qualifications (excluding applied generals)	Gender: Male	1.02	(0.92, 1.13)	0.94	(0.85, 1.04)	0.69	(0.62, 0.76)
	Ethnicity: BAME	0.79	(0.68, 0.91)	0.66	(0.56, 0.76)	0.71	(0.61, 0.82)
	SEN: YES	0.71	(0.40, 1.02)	0.92	(0.60, 1.24)	0.89	(0.64, 1.14)
	SEN: Unknown	1.51	(1.3, 1.72)	2.18	(1.87, 2.49)	1.75	(1.43, 2.06)
	FSM: YES	0.78	(0.56, 1.01)	0.66	(0.46, 0.85)	0.66	(0.51, 0.80)
	IDACI: MEDIUM	0.80	(0.71, 0.89)	0.81	(0.72, 0.90)	0.94	(0.83, 1.04)
	IDACI: HIGH	0.70	(0.59, 0.80)	0.71	(0.61, 0.82)	0.72	(0.62, 0.82)

4 Summary

To conclude, while there are some aspects of awarding in summer 2020 that may warrant further exploration, in most aspects the findings presented within this report provide general support for the fairness of grades awarded in light of the situation imposed by the coronavirus (COVID-19) pandemic.

Nevertheless, there may have been some change in entry behaviour, some degree of grade inflation (increase in top grades), and differences in attainment do seem to have increased between males and females in the context of certain types of qualifications at certain levels.

Returning to our original research questions –

First, there does seem to have been some changes in the total number of grades awarded this summer for these qualifications. For example, there has been an increase in entry size for Level 3 Applied General qualifications and Level 1/2 Performance Table qualifications.

There has been a decrease in entry size over time for Entry Level and Level 1/2 Functional Skills qualifications, and Level 1/2 and Level 4 Other General qualifications, but these changes appear to be ongoing trends. The decreases for Entry Level Other General qualifications and Level 3 Performance Table qualifications (excluding Applied Generals) however seem to be specific to 2020.

It is impossible to deduce the exact reasons behind these changes using this data, but some of the decrease in the numbers could be explained by learners who would have failed either not being entered or not being included in the data submitted by awarding organisations.

Additionally, the mitigations around coronavirus and the closure of centres could have impacted upon entry patterns. Alternatively, for example, some trends could reflect a change in funding arrangements, rather than being due to the 2020 pandemic.

Second, there were some notable increases in the number of top grades being issued this year for some types of qualifications. These increases are largely attributable to the reissuing of grades following the change in approach for GCSEs, AS and A levels, meaning that many grades increased for some VTQ qualifications.

This was not the case for all types of qualifications, however, as some either did not change or exhibited changes that appeared to reflect ongoing trends, rather than being specific to 2020. Only in a very small number of cases did the number of top grades appear to have decreased this year compared to last.

Aside from these increases in top grades, it is encouraging to note that the general shapes of the grade distributions have remained broadly similar this year compared to previous years, suggesting overall that the profile of outcomes was not unduly influenced by awarding process in 2020.

Third, in the majority of cases, attainment gaps between different demographic groups have remained roughly the same over the past 3 years. However, there are

some specific cases where attainment gaps have changed. For example, some changes in the attainment gap may be suggested between males and females taking Level 1/2 and Level 3 Other General qualifications and Level 3 Performance Table qualifications (excluding Applied General qualifications).

As mentioned above, it is not possible to say with certainty what the cause of these differences may be; and further exploration may or may not shed light, as there are a number of possible alternatives (including a genuine change in ability of cohorts between years) which data alone may not be able to separate out.

Some changes in the attainment gap were also observed between learners with no special educational needs and learners for whom special educational needs status is unknown. However, it is difficult to know what conclusions can be drawn from this. There is no evidence from this analysis that the attainment gap between learner groups with and without special educational needs has changed over time.

A small degree of change is to be expected in any given year and many of these changes are in line with those expectations. We shall continue to monitor and engage with the system and qualification outcomes as we move through the coronavirus (COVID-19) pandemic response measures, with the intention of ensuring outcomes are as fair and valid as possible.

Technical appendices for the equalities analysis

Table 1. Counts of learners included in the equalities analysis per qualification group – Level 1/2

Qualification group	2018	2019	2020
'Other General' Qualifications (excluding PTQs)	29,730	24,420	11,450
Performance Table Qualifications	70,995	103,300	6,855
Total	100,720	127,720	18,310

Note. Values are rounded to the nearest 5

Table 2. Counts of learners included in the equalities analysis per qualification group – Level 3

Qualification group	2018	2019	2020
'Other General' Qualifications (excluding PTQs)	25,860	31,095	26,335
Applied Generals	30,200	32,670	49,790
Other Performance Table Qualifications (excluding applied generals)	19,740	20,985	18,525
Total	75,800	84,750	94,650

Note. Values are rounded to the nearest 5

Figure 1. Frequency distributions of key variables – Level 1/2

a)

b)

c)

Qualification level: Level 1/2
FSM groups distribution

d)

Qualification level: Level 1/2
SEN groups distribution

e)

f)

Qualification level: Level 1/2
IDACI groups distribution
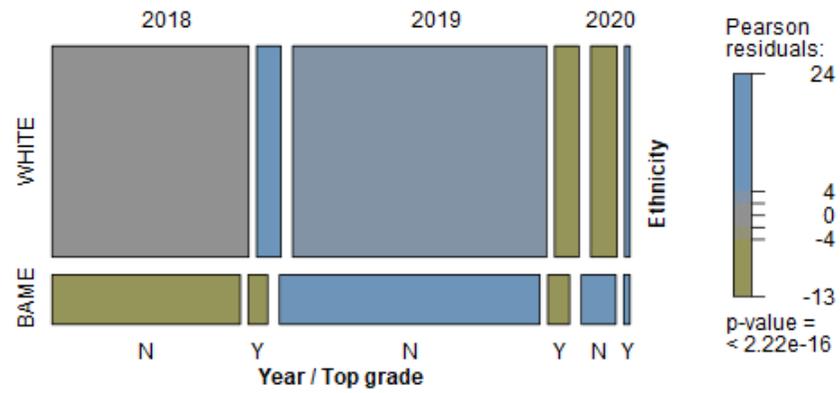
Qualification level: Level 1/2
Top grade distribution
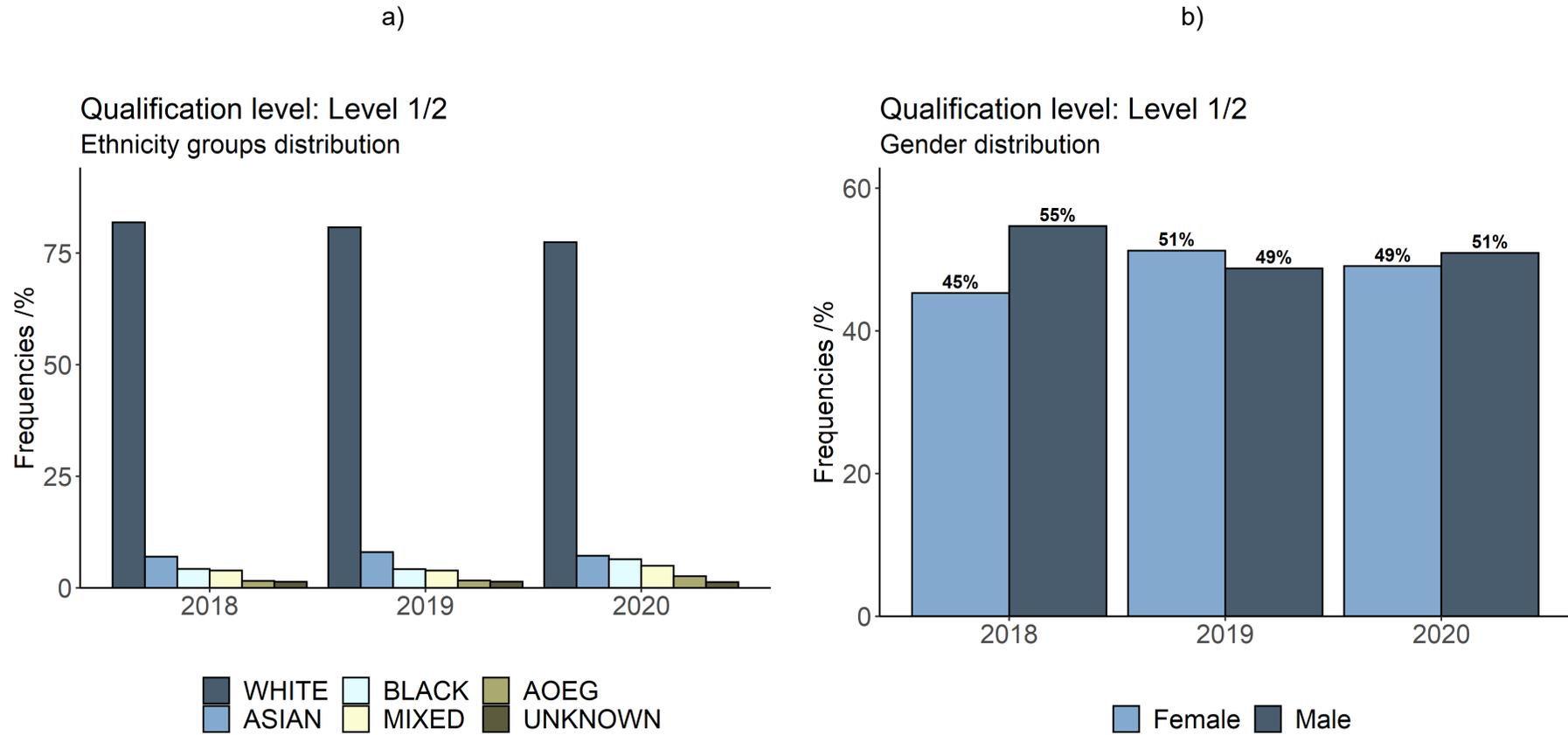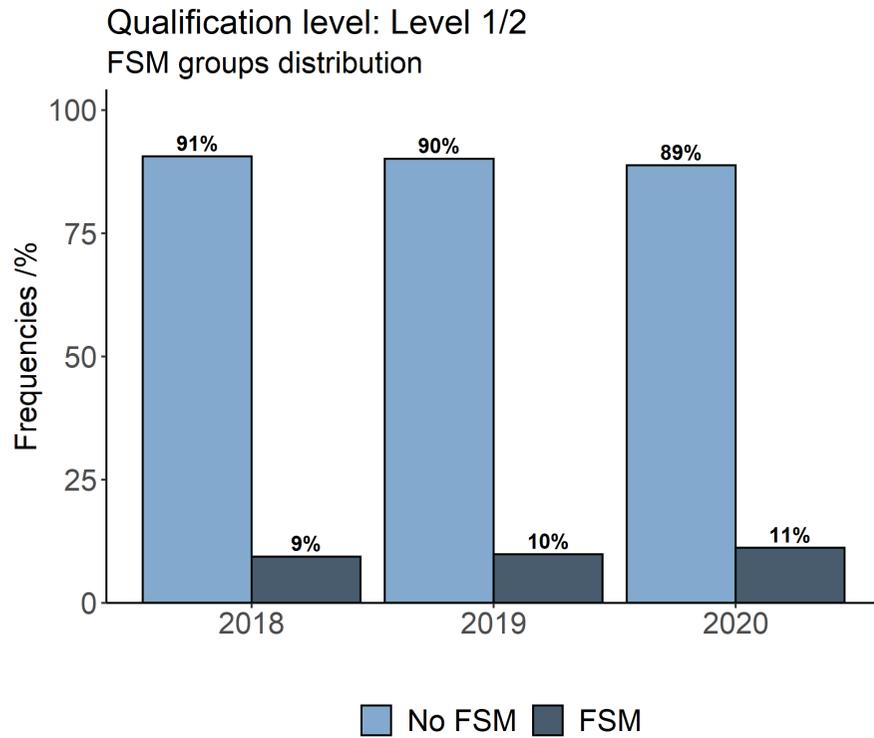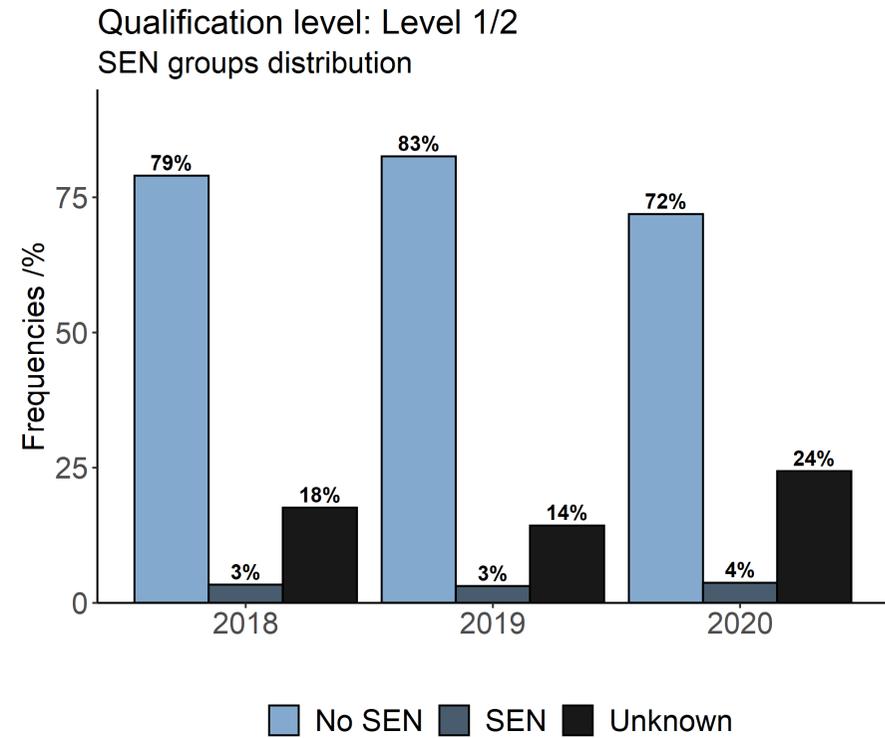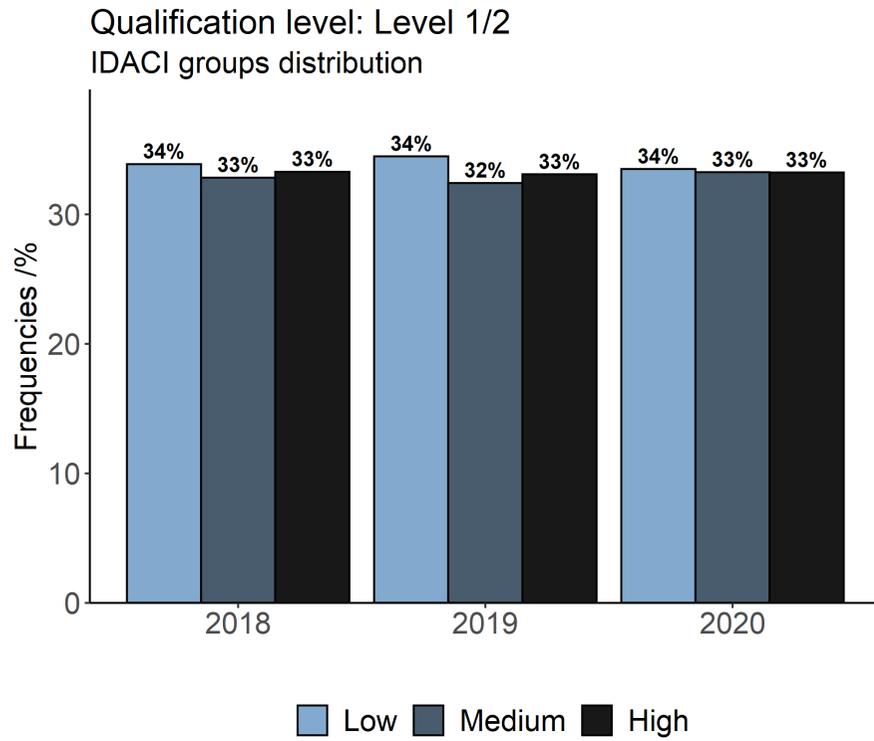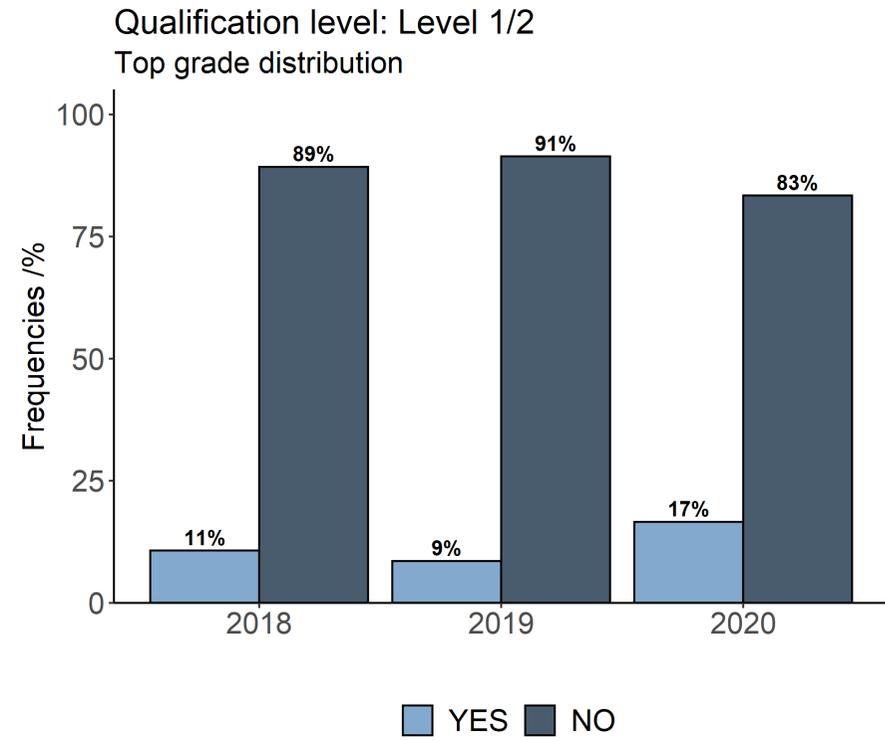
Figure 2. Frequency distributions of key variables – Level 3
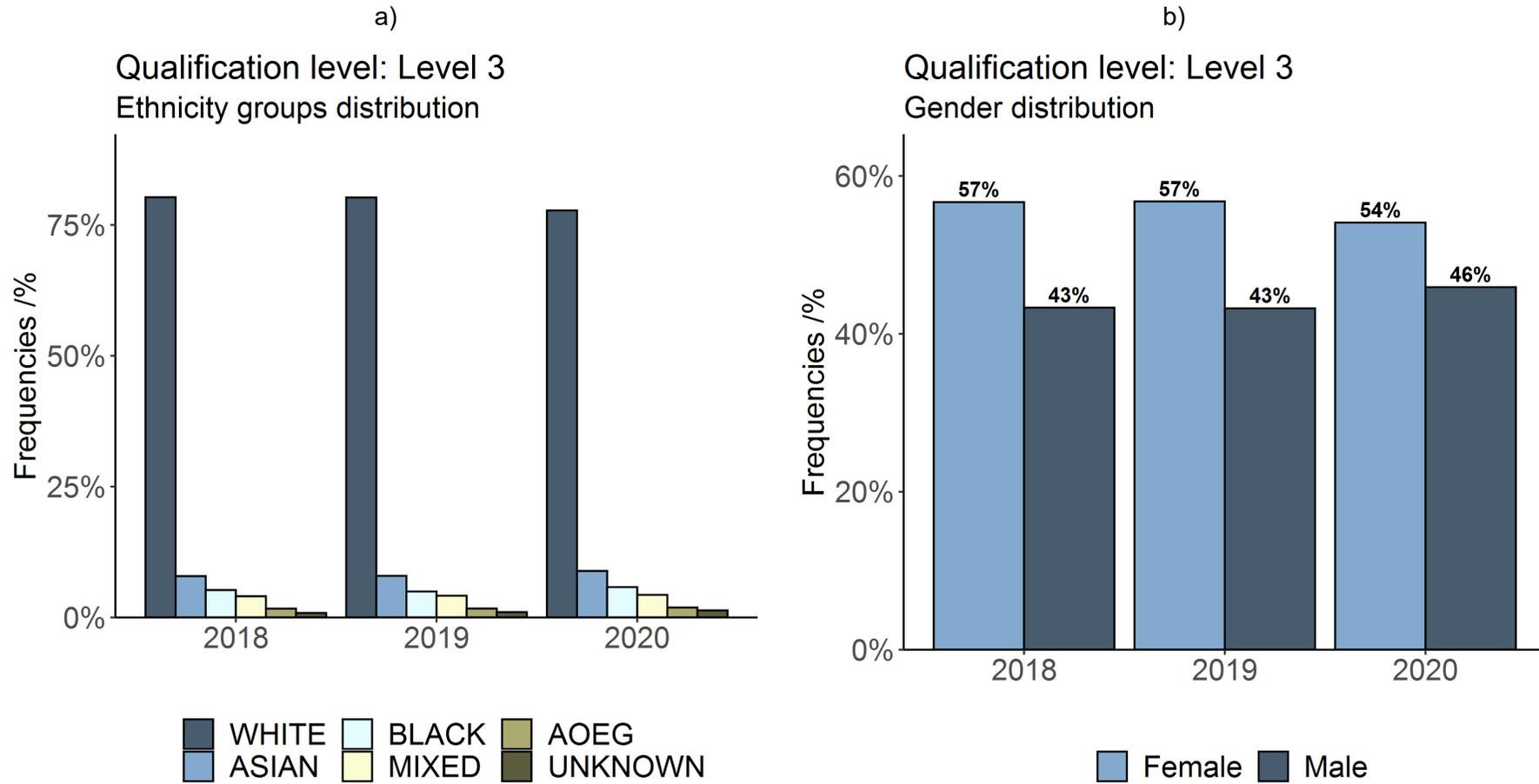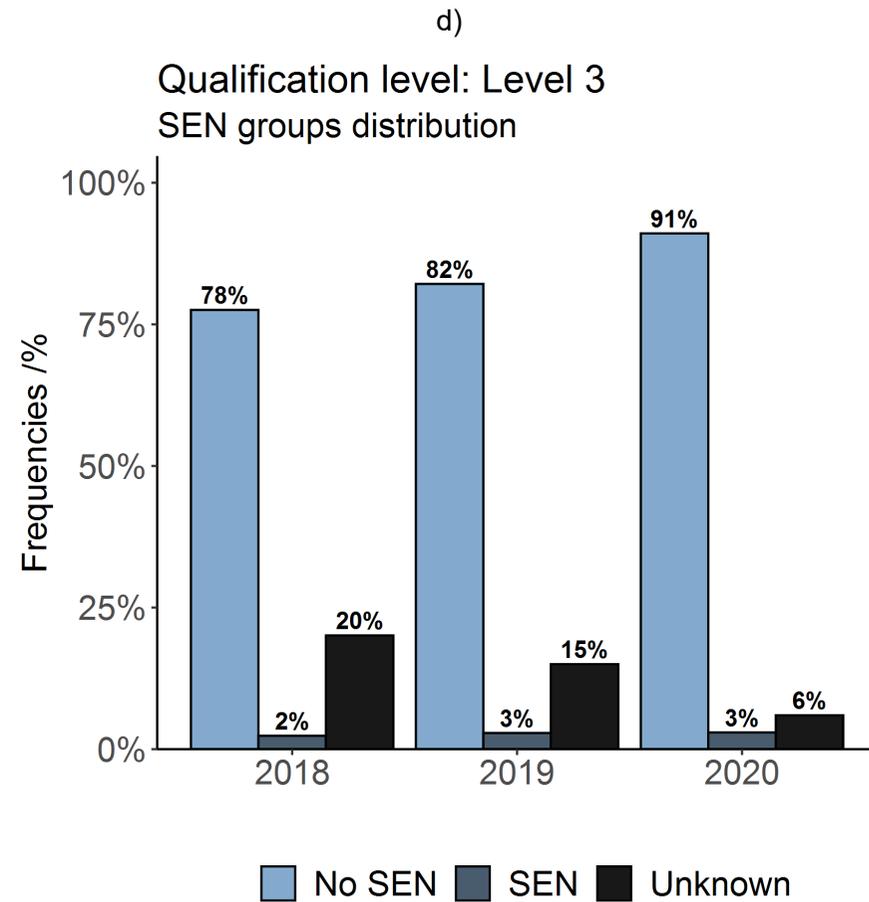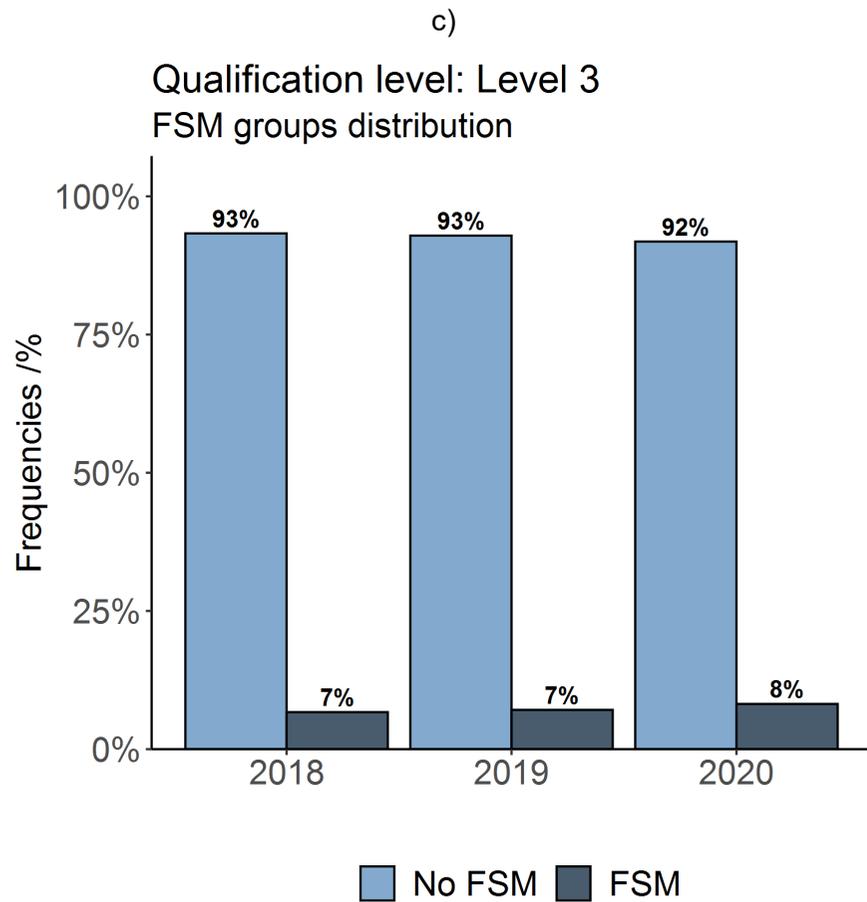
c)

Qualification level: Level 3
FSM groups distribution

d)

Qualification level: Level 3
SEN groups distribution

e)

Qualification level: Level 3
IDACI groups distribution

f)
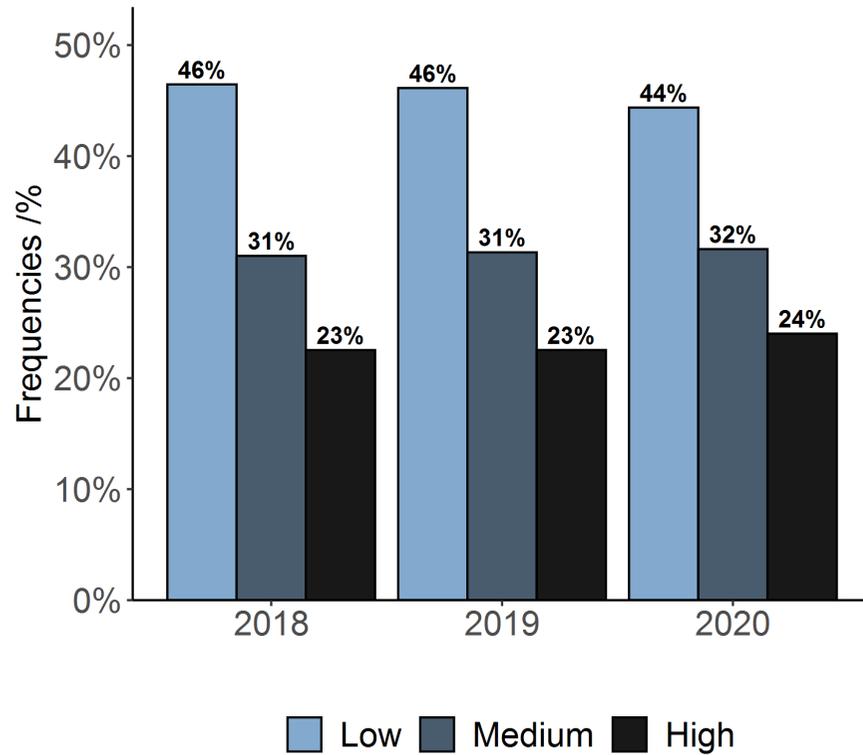
Qualification level: Level 3
Top grade distribution
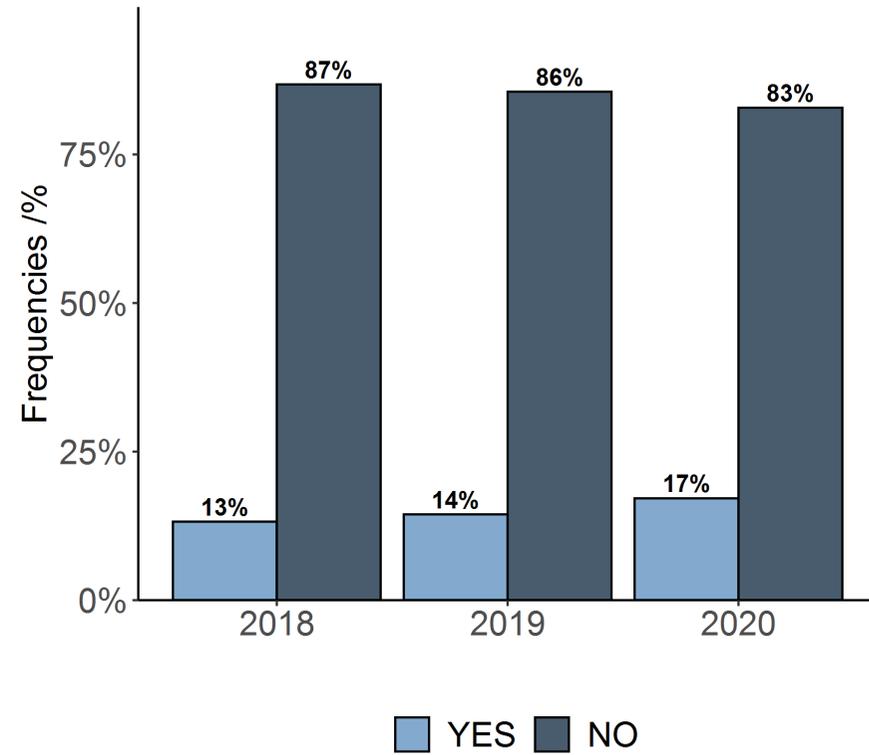
Figure 3. Frequency distributions of key variables by qualification group – Level 1/2

a)   b)

c)

d)

e)

f)

Qualification level: Level 1/2

SEN groups distribution

Qualification level: Level 1/2

FSM groups distribution

g)

Qualification level: Level 1/2

Top grade distribution
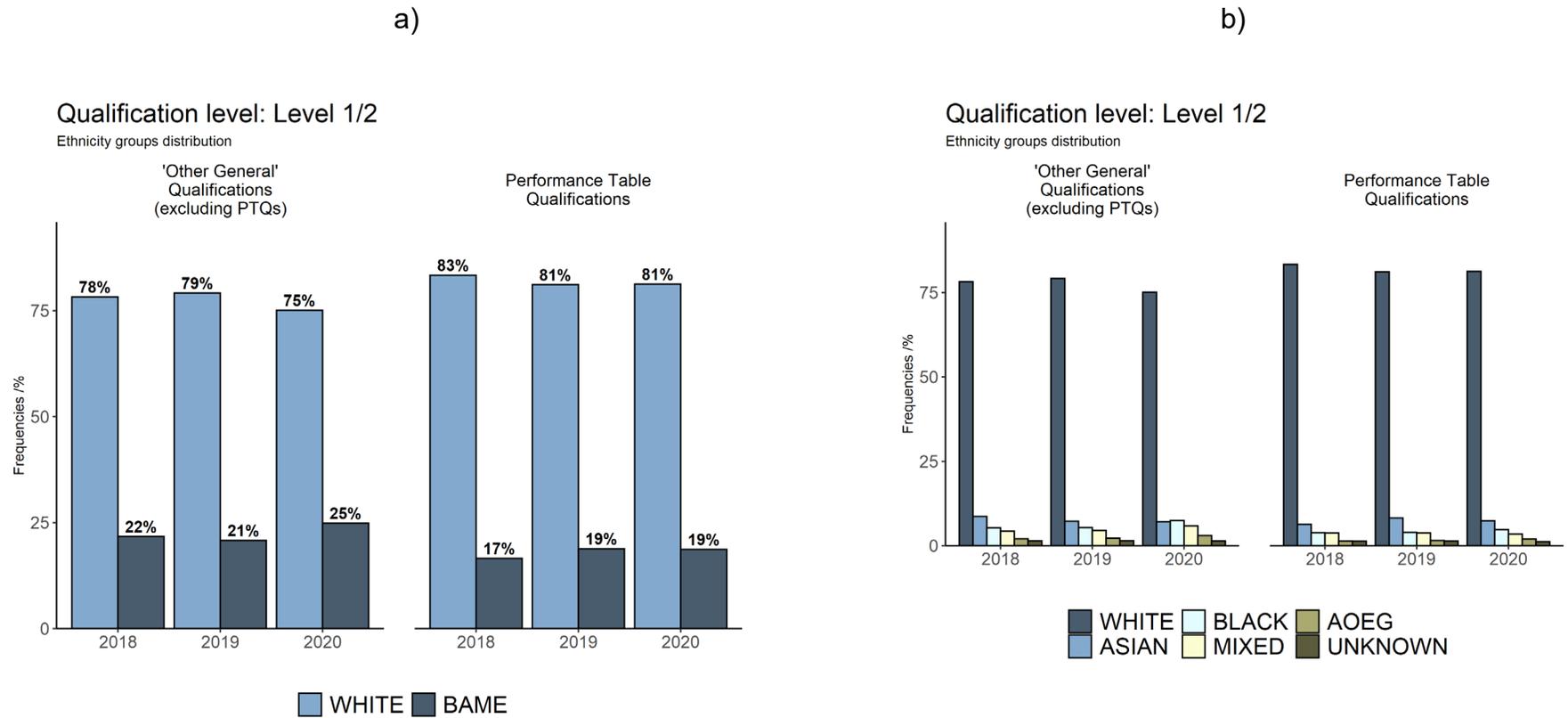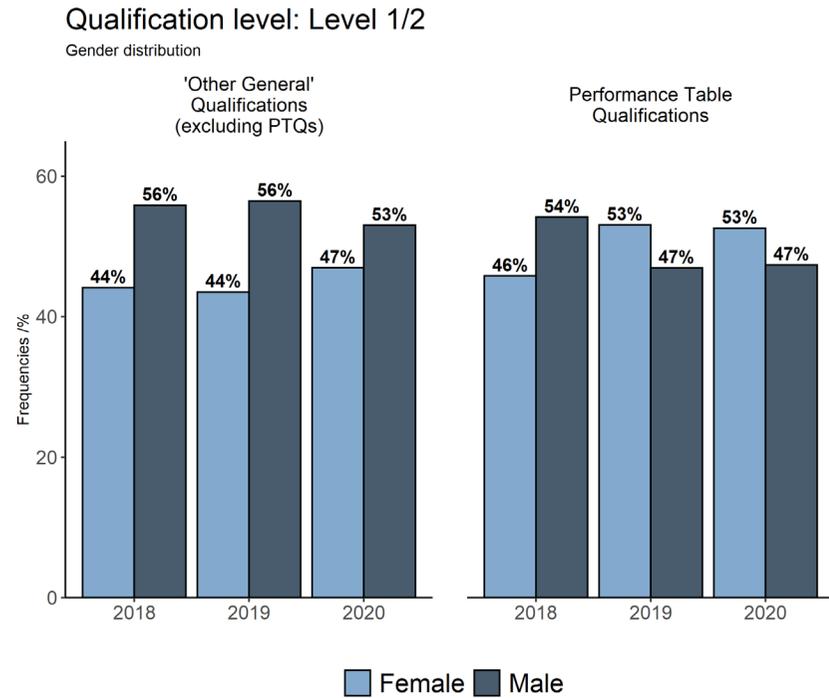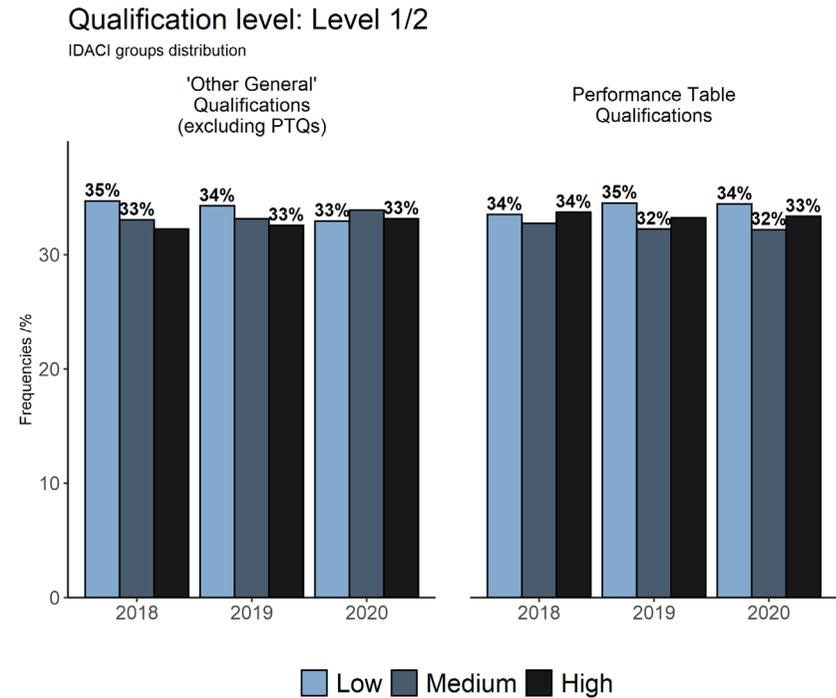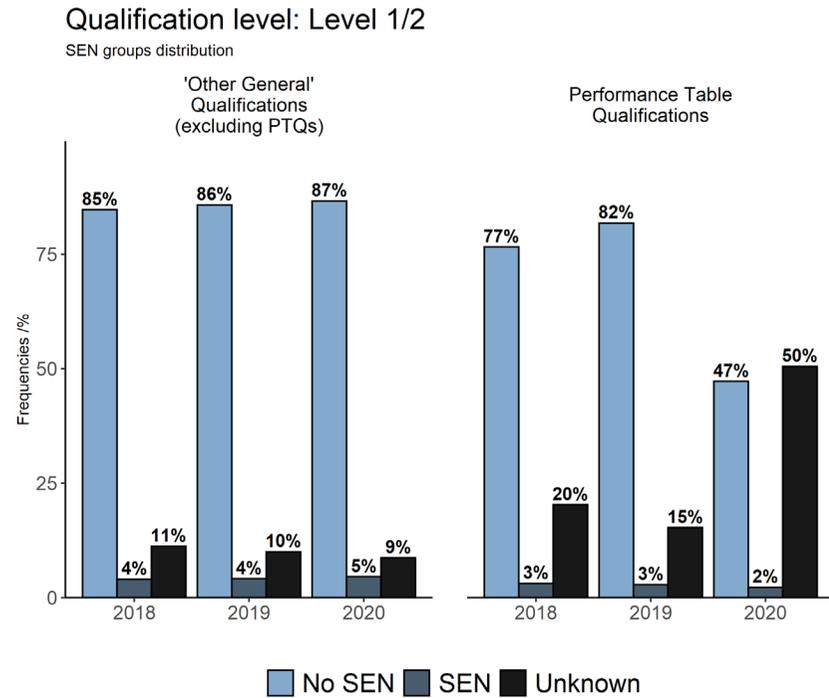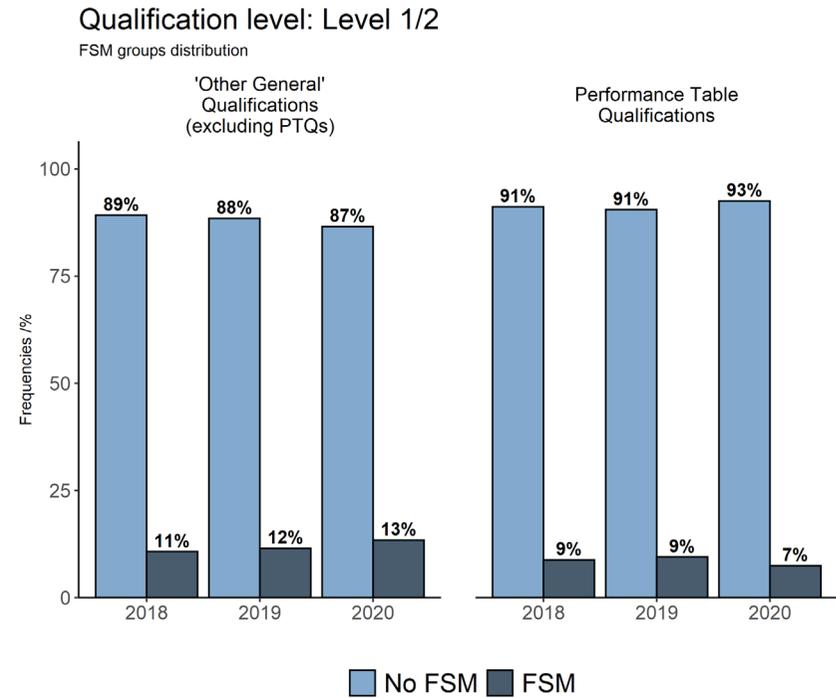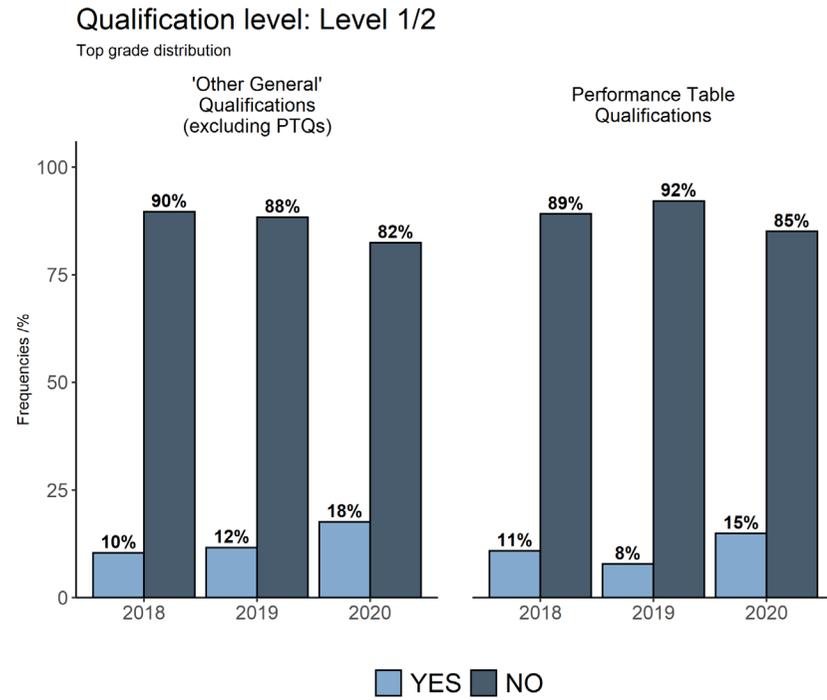
Figure 4. Frequency distributions of key variables by qualification group – Level 3

c)
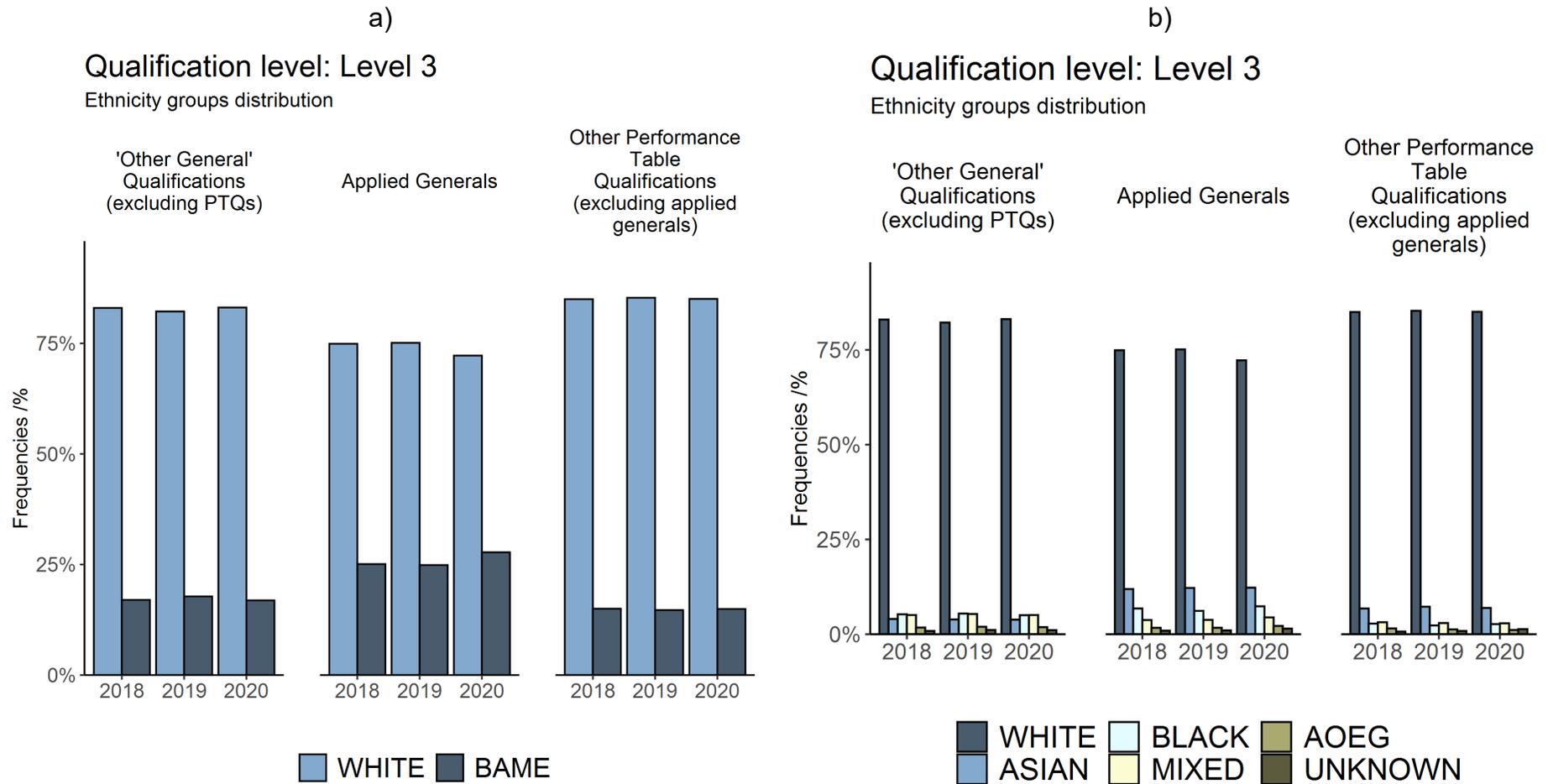
Qualification level: Level 3

Gender distribution
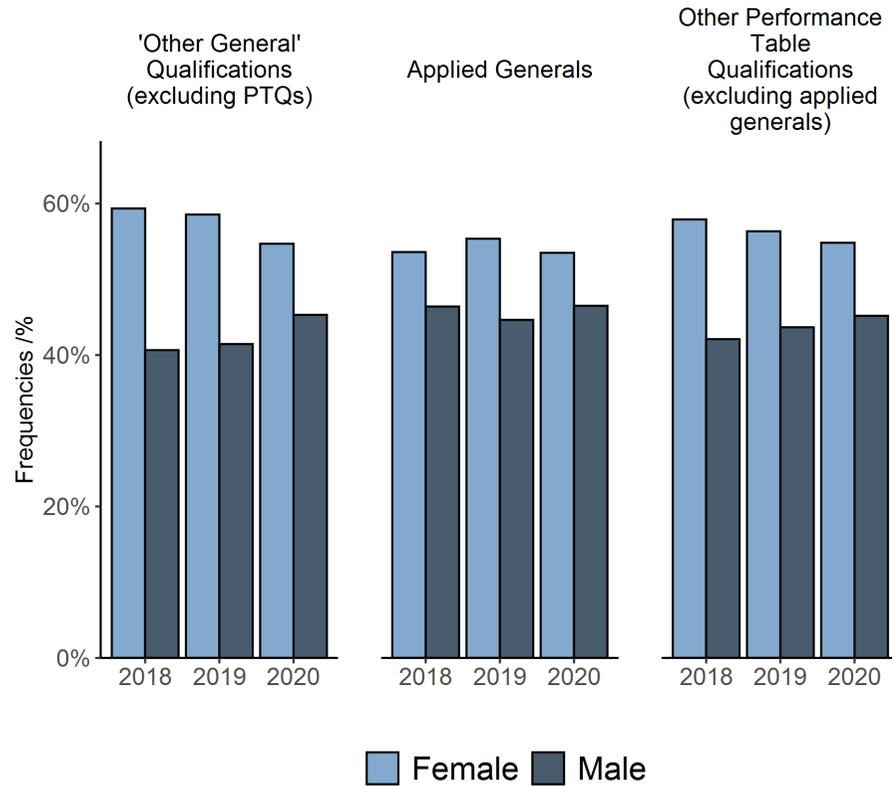
d)

Qualification level: Level 3
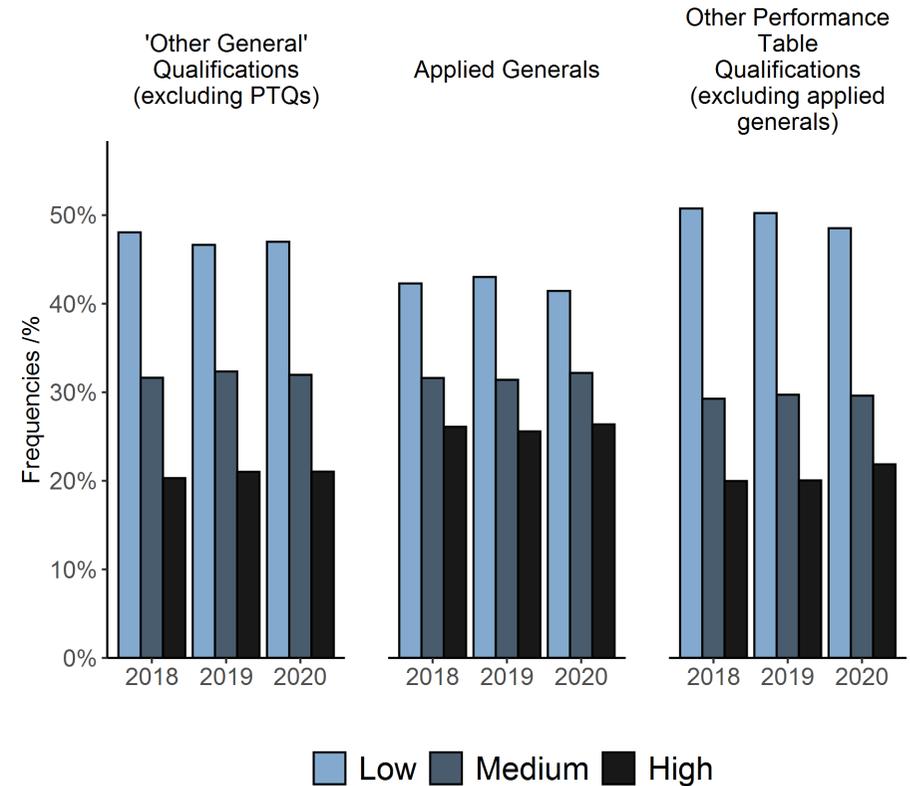
IDACI groups distribution

e)

Qualification level: Level 3

SEN groups distribution

f)

Qualification level: Level 3

FSM groups distribution

g)
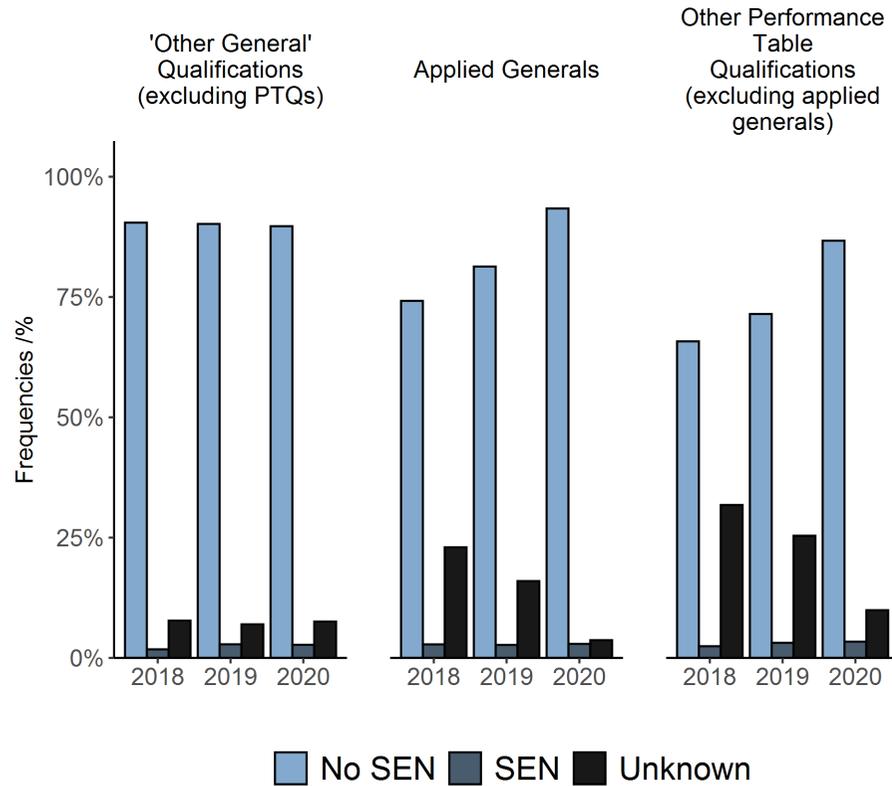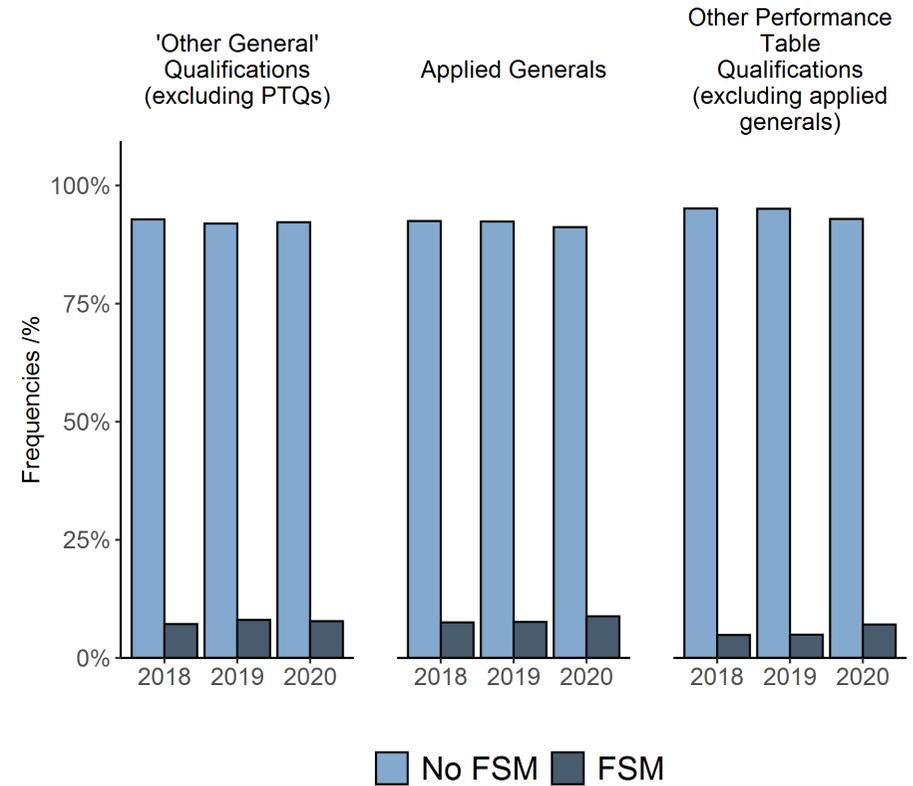
Qualification level: Level 3

Top grade distribution
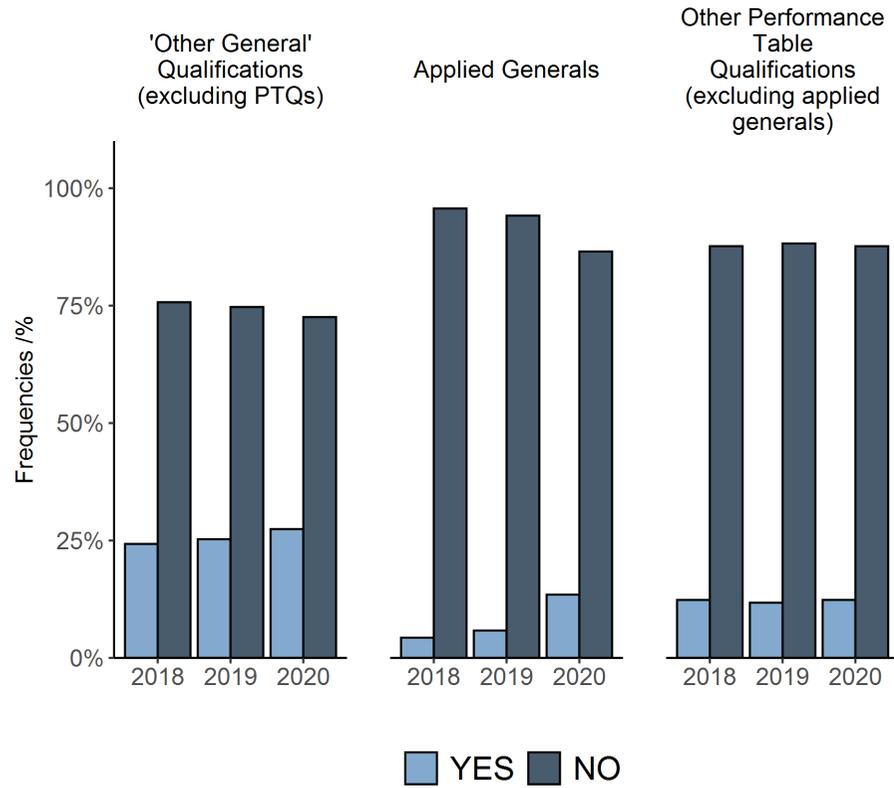
Figure 5. Associations between demographic/socio-economic factors and top grade – Level 1/2
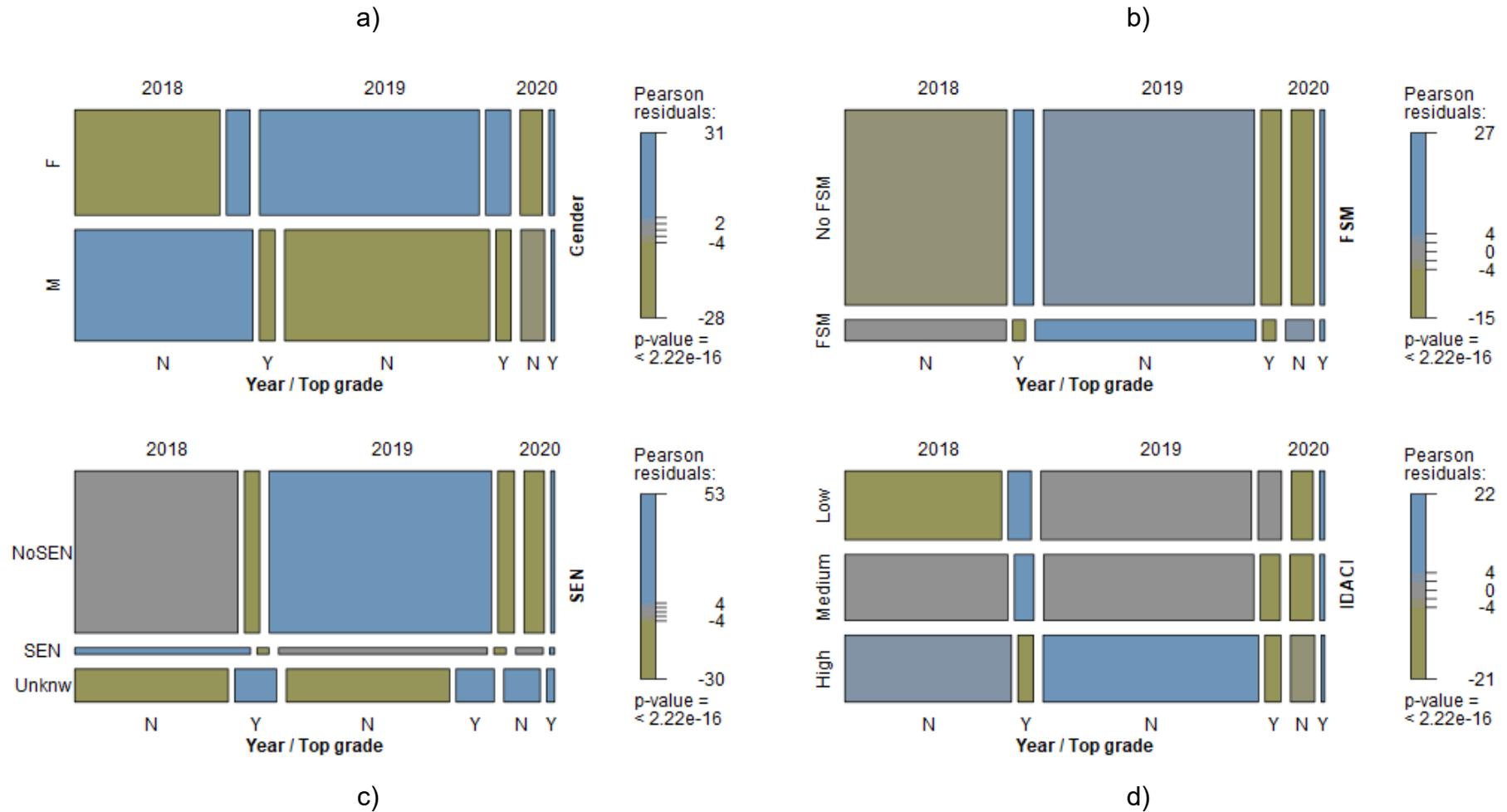
e)
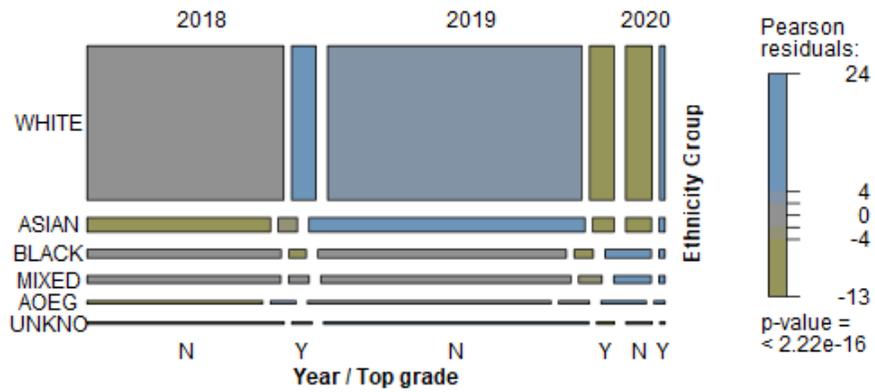
f)

Figure 6. Associations between demographic/socio-economic factors and top grade – Level 3
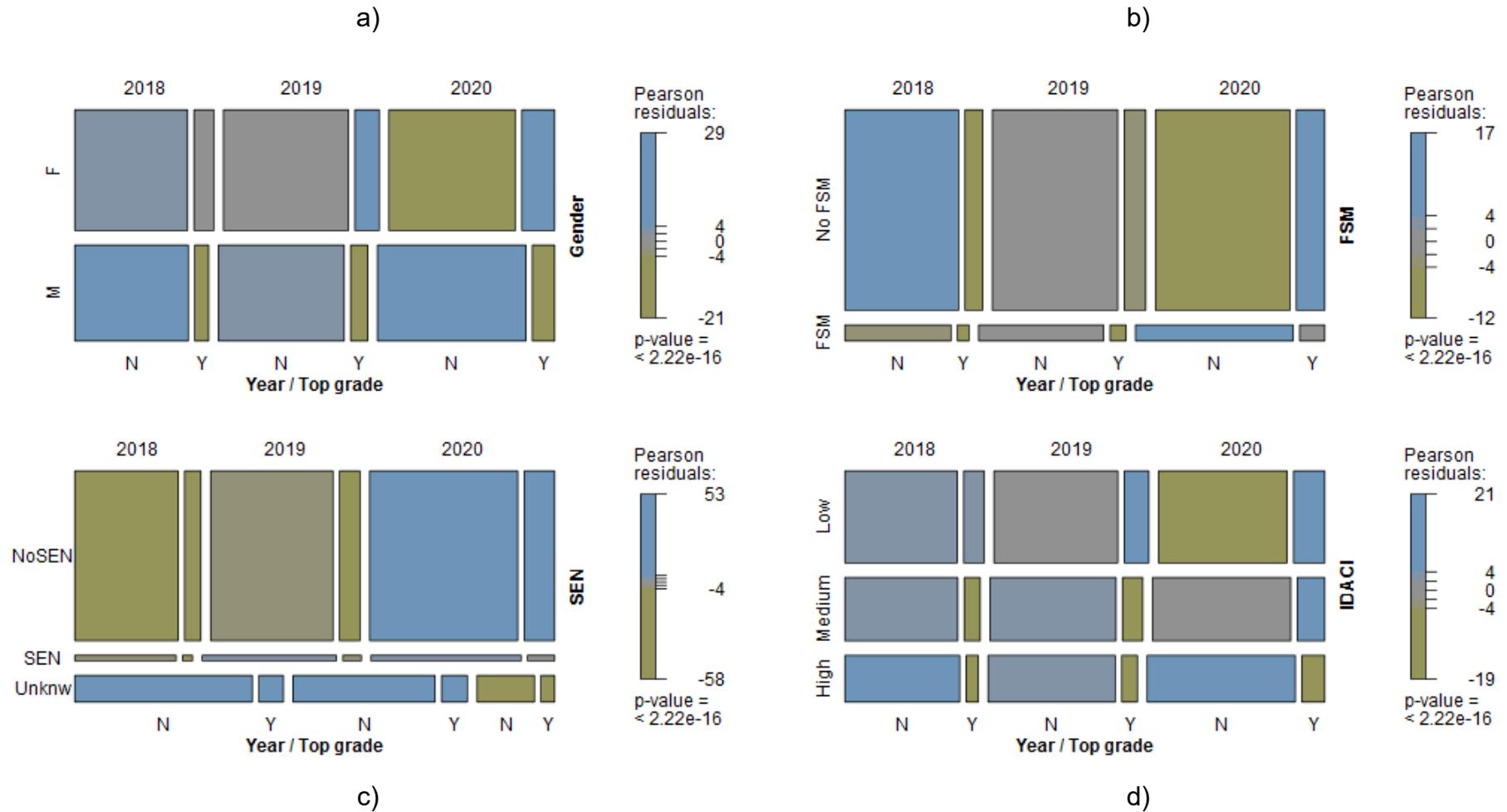
e)
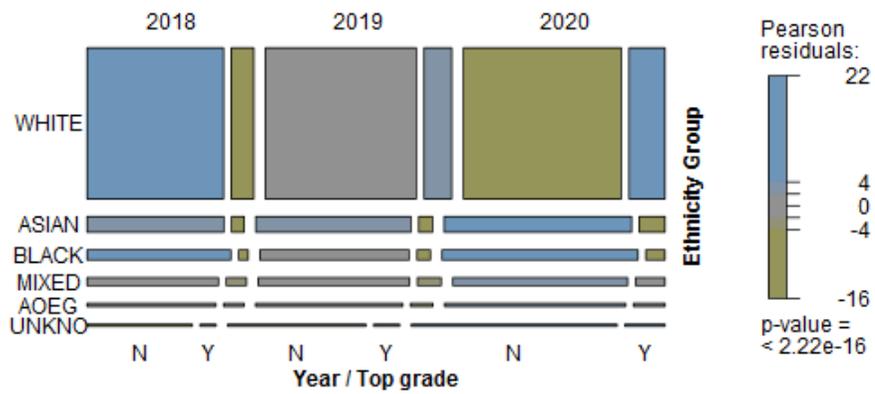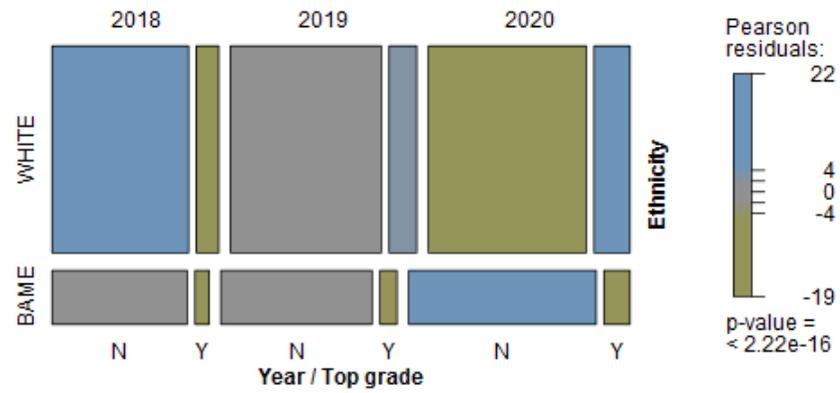
f)

Figure 7. Associations between demographic/socio-economic factors and top grade by qualification group – Level 1/2
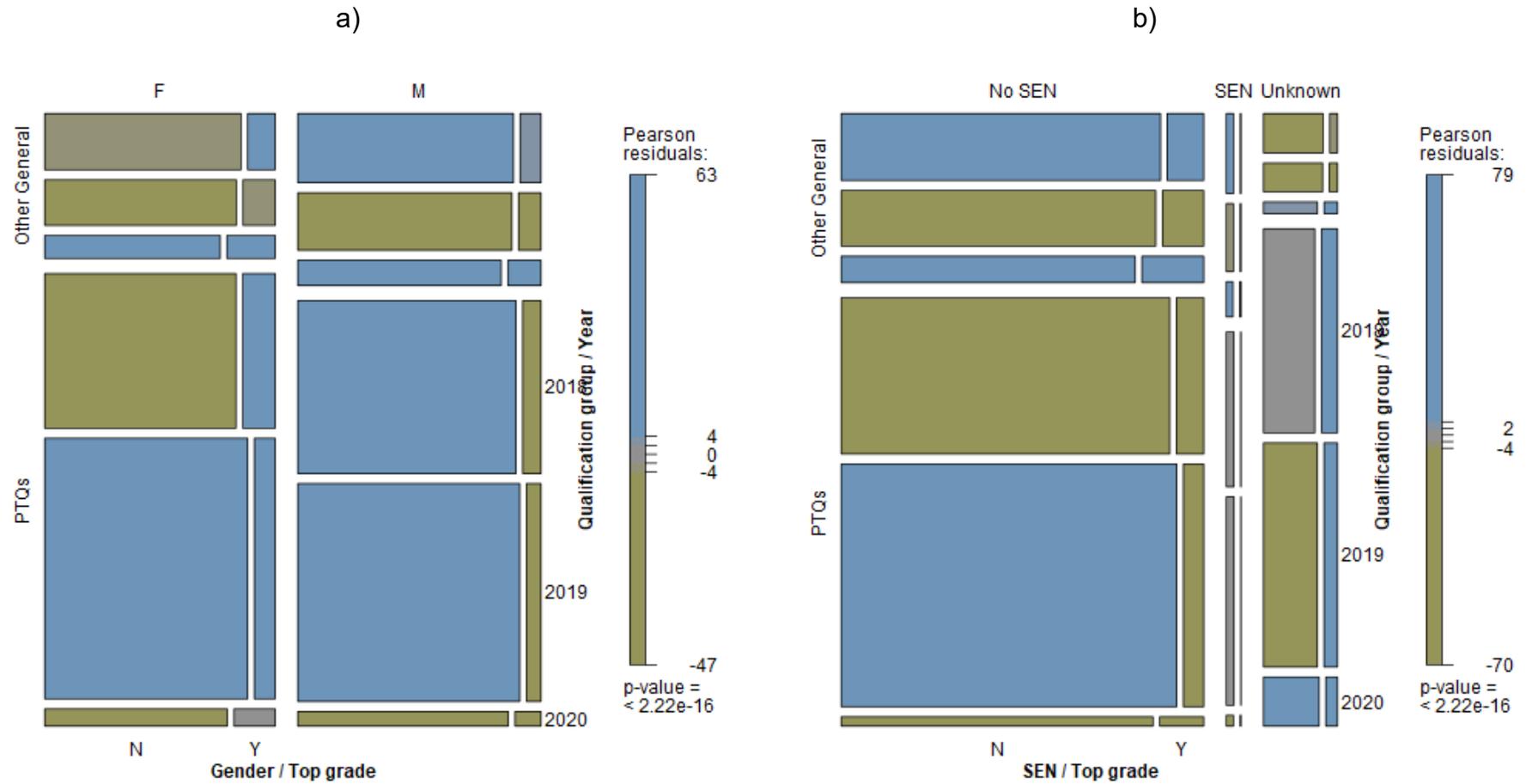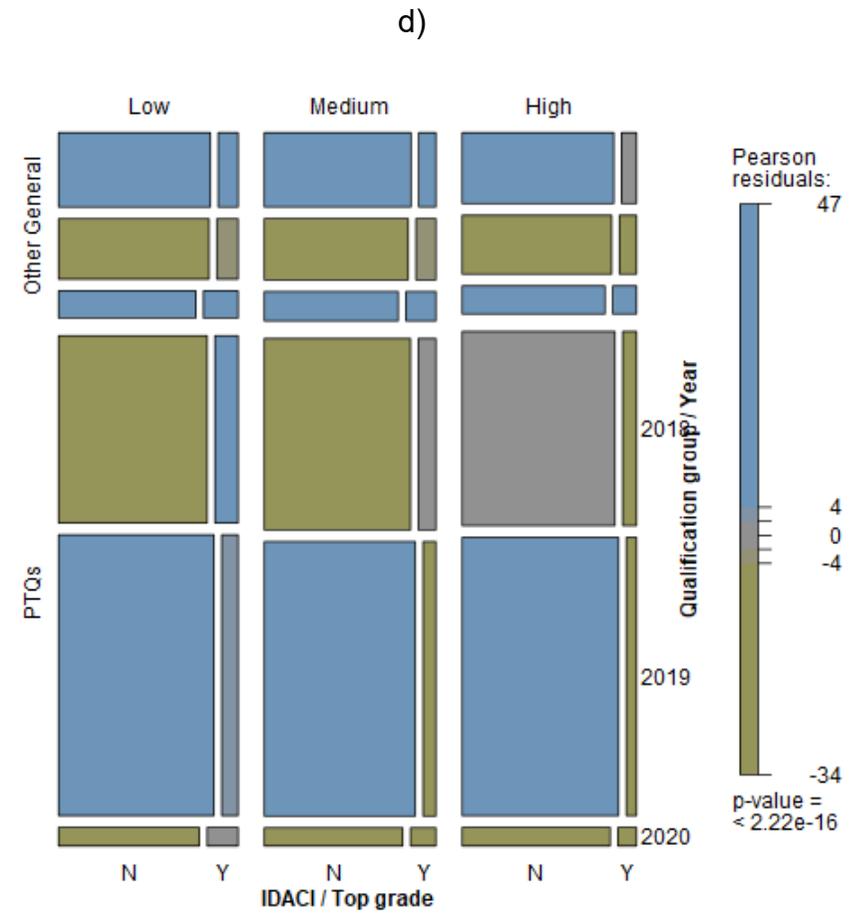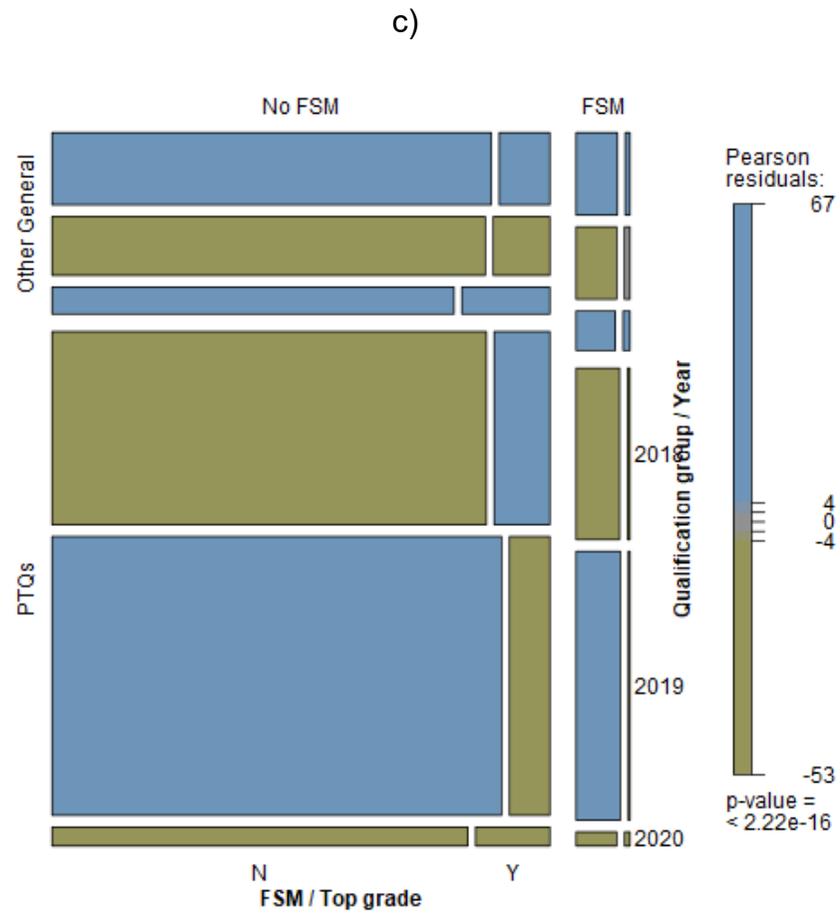
e)
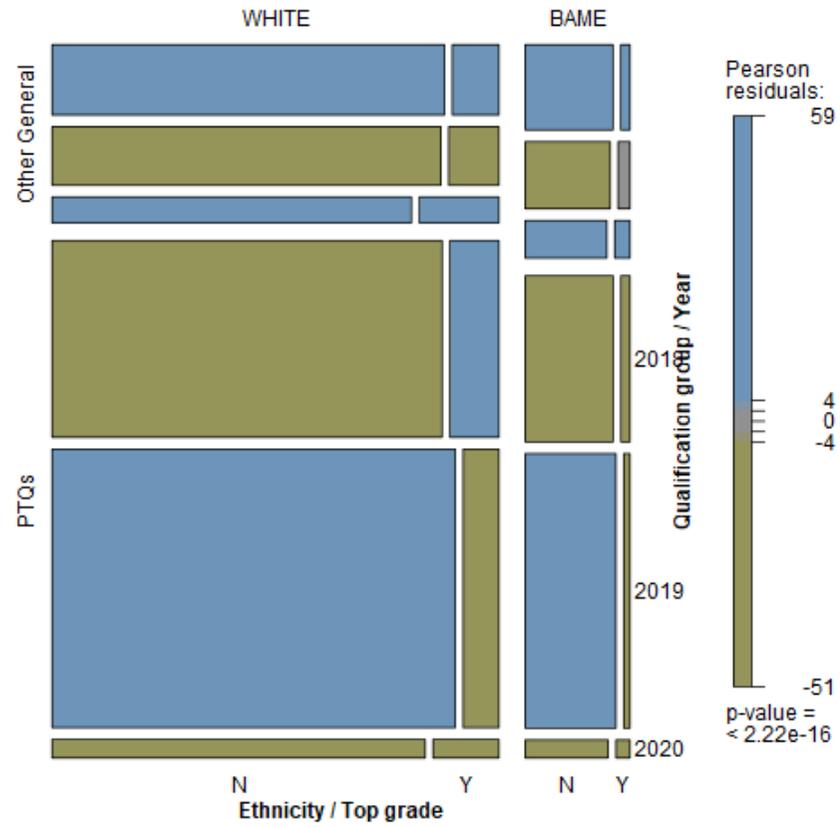
Figure 8. Associations between demographic/socio-economic factors and top grade by qualification group – Level 3

c)

d)

e)

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