Understanding your results: Skills Challenge Certificate

The Results Report contains additional information to help you understand how have calculated your students' results, and the data we have used in the calculation. We have provided some data at both centre and candidate level, which is described below.

We standardised grades using statistical processes developed by WJEC and approved by Qualifications Wales.

Centre-level data

The centre level data shows you the distribution of grades for your centre for each source of evidence used to calculate your students' grades. We have presented the information as tables and a graph.

Historical data: your centre's results in recent years

For the Advanced Skills Challenge Certificate, we used candidates' banked unit UMS scores, together with the rank order you provided, to calculate grades. Historical data for your centre is provided for information.

If your centre had too few candidates with banked evidence for this approach to work reliably, your centre's grade distribution from 2019 has been used as the basis for calculating grades.

Centre assessment grades (2020)

This shows the distribution of centre assessment grades which you submitted.

Calculated grades (2020)

This is the distribution of the final calculated grades for your centre. These are the results that will appear on your students' certificates.

Candidate-level data

For each candidate, you can see the centre assessment grade and rank order which you submitted, together with the final calculated grade.

How your grades were calculated

Most candidates entered to complete the Advanced Skills Challenge Certificate have banked unit marks and grades from previous series. This provides a valid and reliable basis for calculating grades. The method is similar to that used to standardise A-level grades in Wales.

Calculation stage

The approach used to calculate grades is based on what we would do if a candidate missed an element of a qualification, using a statistical prediction based on 'z-scores' to fill in the gap in the candidate's banked unit scores. For example, if a candidate was missing a UMS for unit 4 (Community Challenge), we would calculate their total on the other units:

$UMS_{cand} = Unit1 + Unit2 + Unit3$

We would then calculate what the mean and standard deviation was for every other candidate in the cohort, for these units. We would use this to calculate a z-score for the candidates performance. The z-score is a standardised measure of where in a cohort distribution the candidate lies:

$Z_{cand} = (UMS123_{cand} – meanUMS123_{others}) / sd123_{others}$

Next, the mean and standard deviation is calculated on Unit 4 for every other candidate, and finally the three values – z-score to establish the position of the candidate in a standardised mark distribution, and the mean and standard deviation for the 'missing unit' – are used to calculate a UMS value.

$UMS4_{cand} = (Z_{cand} * sd4_{other}) + meanUMS4_{others}$

As some unit combinations are more often taken in advance of the final series than others, historic unit performance is used to ensure that the model is sufficiently reliable. Unit performance for the 2018 and 2019 cohorts was used alongside 2020 data was used for this purpose.

To illustrate, if a candidate only had data for units 2 and 3 then the predicted score would derived as follows:

$Z_{cand} = (UMS23_{cand} – meanUMS23_{2018}) / sd23_{2018}$

$UMS1_{cand} = (Z_{cand} * sd1_{2018}) + meanUMS1_{2018}$

$UMS4_{cand} = (Z_{cand} * sd4_{2018}) + meanUMS4_{2018}$

For all candidates completing the qualification this summer, this method was used to fill in gaps in marks caused by candidates not being able to complete all units.

Grade distribution and adjustment stage

'Grade thresholds' were then set to assign all scores to a grade. It is possible to amend these values to bring overall outcomes closer to a predefined grade distribution. For the Advanced Skills Challenge Certificate, consideration was given to ensuring that outcomes were similar to 2019, as well as coming close to a statistical prediction for grade outcomes amongst 18-year-olds matched to prior attainment data.

Grade allocation stage

Once grade threshold values were set, grade allocations were produced for each centre, based on the imputed score distribution for their candidates. Grades were then distributed to the candidates included in the calculation stage of the model, based on the rank order provided by each centre.

Slotting-in stage

Candidates not included in the calculation stage of the model were 'slotted into' a grade according to their centre assessment grade (CAG) and rank order position, so that each of these candidates received the closest grade to their CAG which does not break the centre's rank order.

For example, for candidate X, if the candidate above X in the centre rank order received a grade B via the model, and the candidate below X receives an E, then if X's CAG is a B or better they will get a B; if it is E or worse they will get an E and otherwise they will be awarded their CAG on the basis that it falls between the grades for candidates ranked either side of X.

Centres with insufficient banked unit marks and grades

As this approach cannot work for centres with low volumes of banked assessment marks amongst its candidates, for these centres a grade distribution based on 2019 outcomes was used as a basis for The approach is similar to that used at AS in Wales, as it is based on direct centre performance. This method was used where less than half of a centre's 2020 entry had ay banked unit grades.

Review of outcomes

An analysis of outcomes, setting out aggregated entries and proposed grade distributions for a decision-making group led by the Responsible Officer to consider. Where outcomes were not well aligned with previous series, the model was adjusted to ensure comparability

between years, using the grade thresholds. These decisions were taken by the Responsible Officer after consultation with the Standards Officer and subject teams.