SQA

Evaluation of the 2023 Approach to the Assessment of Graded National Courses:

Experiences of and reflections on 2023 National Qualifications assessment

Technical appendix

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Survey methodology

Experiences of the 2023 Approach to the Assessment of Graded National Courses

The learner and practitioner surveys were developed by researchers in SQA's Policy, Analysis and Standards directorate in the autumn of 2023, based on those used for the evaluations of the 2021[1] and 2022[2] assessment approaches. The surveys were carried out in November 2023. This timescale was chosen as it meant that all aspects of the assessment process were complete, including the appeals process and the exam exceptional circumstances consideration service. It was also soon enough after events for experiences to still be relatively fresh in participants' minds.

The surveys were distributed through 461 SQA co-ordinators in schools and colleges in Scotland that offered National Qualifications in 2022–23. Co-ordinators were asked to pass on a survey link to learners and practitioners with direct involvement in National Qualifications in 2023. The learner survey was also distributed through a QR code in the Your National Qualifications booklet, which is given to all National Qualification learners in Scotland.

For the practitioner survey, one of five different online survey links was sent to each centre, depending on their Scottish Index of Multiple Deprivation[3] (SIMD) quintile[4]. Different links were distributed to ensure that the survey had responses from centres in a range of contexts and so that analysis could be carried out by relative deprivation. However, it is acknowledged that a centre's SIMD quintile may not always be fully representative of its catchment area.

- ♦ The SIMD 1 link was sent to 69 centres (15%)
- ♦ The SIMD 2 link to 87 (19%)
- ♦ The SIMD 3 link to 99 (21%)
- ♦ The SIMD 4 link to 119 (26%)
- ♦ The SIMD 5 link to 87 (19%)

In terms of responses:

- ♦ 172 (14%) of practitioner respondents were from centres in SIMD quintile 1
- ♦ 186 (15%) from centres in SIMD quintile 2
- ♦ 179 (14%) from centres in SIMD quintile 3
- ♦ 475 (38%) from centres in SIMD quintile 4
- ♦ 225 (18%) from centres in SIMD quintile 5

This was the first year we have trialled this method to couple practitioner response with centre SIMD quintile. However, we know that the SIMD link for quintile 4 was shared on social media. While we cannot quantify the effect of this, it is clear that there was a disproportionate number of responses from SIMD quintile 4. Therefore, in the analysis of practitioner responses by SIMD, to reduce the potential of anomalous results, SIMD quintile 4 has been excluded. We will look at strategies and possible alternative approaches to mitigate this risk in the future.

In total, responses were received from 3,437 learners and 1,237 practitioners. With such numbers, and assuming the respondents were typical of the wider populations of learners and practitioners, there can be a high degree of confidence that the results of these surveys are broadly in line with the views of learners and practitioners generally.

It is possible, as with any survey activity of this type, that those who chose to respond were motivated to do so by having particularly strong opinions that they wished to share with SQA. It is also possible that the schools and colleges who chose to take part in this research may not have been entirely representative of Scottish schools and colleges as a whole.

The more detailed analyses of respondents in the separate learner and practitioner reports indicate that there was a good geographical spread of respondents, and a spread of practitioners who taught a wide range of subjects. However, there was an over-representation of independent school learners and practitioners in the survey respondents when compared to the proportions of National Qualification entries that SQA receives from independent schools.

♦ 88% of learner respondents studied at and 89% of practitioner respondents taught at local authority schools; this compares to 92% of entries at National 5, Higher and Advanced Higher which came from local authority schools in 2022–23.

♦ 10% of learner respondents studied at and 9% of practitioner respondents taught at independent schools; this compares to 7% of entries at National 5, Higher and Advanced Higher which came from independent schools in 2022–23.

♦ <0.5% of learner respondents studied at and 2% of practitioner respondents taught at FE colleges; this compares to 1% of entries at National 5, Higher and Advanced Higher which came from FE colleges in 2022–23.

Practitioner respondents came from across all 32 local authority areas. The table below compares the proportion of practitioner survey respondents by local authority area with the proportion of secondary teachers in Scotland by local authority[5]. Note, however, that survey respondents also included those from independent schools and further education colleges.

Table 1

Local authority area	Percentage of survey respondents	Percentage of local authority secondary teachers
Glasgow	9%	10%
Edinburgh	9%	7%
North Lanarkshire	6%	7%
Fife	6%	7%
North Ayrshire	6%	3%
Renfrewshire	5%	3%
Angus	5%	2%
South Lanarkshire	5%	7%
Aberdeenshire	5%	5%
Dundee City	4%	3%
Highland	4%	5%
Dumfries & Galloway	3%	3%
West Dunbartonshire	3%	2%
West Lothian	3%	4%
Aberdeen City	3%	3%
East Dunbartonshire	3%	3%
East Ayrshire	2%	2%
Inverclyde	2%	1%
Scottish Borders	2%	2%
East Lothian	2%	2%
Falkirk	2%	3%
Argyll & Bute	2%	2%
Moray	2%	2%
South Ayrshire	2%	2%
Stirling	1%	2%
Clackmannanshire	1%	1%
Perth & Kinross	1%	3%
Shetland Islands	1%	1%
East Renfrewshire	1%	3%
Midlothian	0%	2%
Orkney Islands	0%	1%
Eilean Siar	0%	1%

Meanwhile, learner respondents came from 31 of the 32 local authority areas. The table below shows how the proportion of learner survey respondents by local authority area compares with the proportion of S4–S6 learners by local authority[6]. Again, however, note that the survey responses also include those from non-local authority schools.

Table 2

Local authority area	Percentage of survey respondents	Percentage of local authority S4–S6 learners
Edinburgh	11%	8%
South Lanarkshire	9%	7%
Aberdeen City	7%	3%
Dundee City	7%	2%
Aberdeenshire	6%	5%
Glasgow	6%	10%
North Ayrshire	6%	3%
Highland	5%	5%
Renfrewshire	4%	3%
Dumfries & Galloway	4%	3%
North Lanarkshire	4%	7%
Angus	3%	2%
Fife	3%	7%
East Dunbartonshire	3%	3%
Inverclyde	3%	1%
East Ayrshire	2%	2%
West Dunbartonshire	2%	2%
East Renfrewshire	2%	3%
South Ayrshire	2%	2%
East Lothian	2%	2%
Stirling	2%	2%
West Lothian	2%	2%
Midlothian	1%	2%
Clackmannanshire	1%	1%
Shetland Islands	1%	0%
Moray	1%	2%
Perth & Kinross	1%	3%
Scottish Borders	1%	2%
Argyll & Bute	1%	1%
Falkirk	0%	3%
Eilean Siar	0%	0%
Orkney Islands	–	0%

The table below suggests that while those with additional support needs (ASN) may have been under-represented in our sample, other learner characteristics were over-represented in the responses. It is possible that learners with an ASN did not answer 'yes' to the question 'Are you disabled and/or do you have an additional support need?' if they were not also disabled or if they had not required assessment arrangements.

Table 3

Survey respondents	Wider population
♦ 13% of survey respondents said that they were disabled and/or had an ASN.	Scottish Government pupil census data for 2023[7] indicates that: ♦ 43% of secondary school pupils had an ASN. ♦ 3% of secondary school pupils were assessed or declared as having a disability.
♦ 59% of survey respondents described their gender as woman or girl. ♦ 35% described their gender as man or boy. ♦ 2% described their gender as non-binary.	Although not directly comparable to the survey question, pupil census data for 2023 indicates that: ♦ 50% of S4–S6 secondary pupils were female. ♦ 50% of S4–S6 secondary pupils were male.
♦ 17% of survey respondents identified as part of the LGBTQIA+ community.	Although not directly comparable to the survey question[8], according to the ONS[9]: ♦ 3% of the UK population aged 16 years and over identified as lesbian, gay or bisexual (LGB) in 2022. ♦ For those aged 16 to 24 years, 9% identified as LGB.
♦ 86% of survey respondents were from the aggregated White ethnic group. ♦ 7% were from the aggregated Asian ethnic group. ♦ 5% were from the aggregated African, aggregated Arab, aggregated Caribbean or Black, and Mixed or Multiple ethnic groups.	Pupil census data for 2023 for S4–S6 secondary pupils indicates that: ♦ 89% were from the aggregated White ethnic group. ♦ 5% were from the aggregated Asian ethnic group. ♦ 5% were from the aggregated African, aggregated Arab, aggregated Caribbean or Black, and Mixed or Multiple ethnic groups.
♦ 5% of survey respondents said that they were care experienced.	Although not directly comparable to the survey question[10], according to Scottish Government statistics[11]: ♦ 1% of children were looked after in 2022.

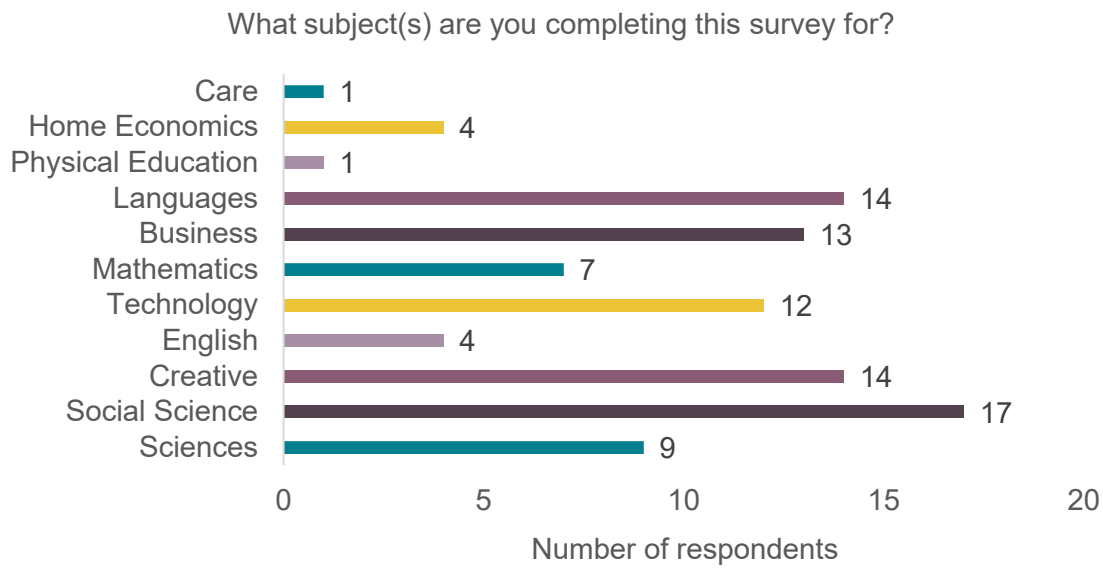| Survey respondents	Wider population
Of those learners who submitted a postcode recognised by the Scottish Government's SIMD postcode lookup tool[12]: ♦ 16% had postcodes in SIMD quintile 1. ♦ 14% had postcodes in SIMD quintile 2. ♦ 17% had postcodes in SIMD quintile 3. ♦ 23% had postcodes in SIMD quintile 4. ♦ 30% had postcodes in SIMD quintile 5.	Pupil census data for 2023 for secondary pupils indicates that: ♦ 22% had postcodes in SIMD quintile 1. ♦ 19% had postcodes in SIMD quintile 2. ♦ 18% had postcodes in SIMD quintile 3. ♦ 21% had postcodes in SIMD quintile 4. ♦ 20% had postcodes in SIMD quintile 5.

Reflections on standards

In line with the approach taken for the learner and practitioner surveys, the SQA senior appointee and qualifications teams survey was developed by researchers in SQA's Policy, Analysis and Standards directorate in the autumn of 2023, based on those used for the evaluations of the 2021 and 2022 assessment approaches. The survey was carried out in November 2023. This timescale was chosen as it meant that all aspects of the assessment process were complete, including the appeals process and the exam exceptional circumstances consideration service. It was also soon enough after events for experiences to still be relatively fresh in participants' minds.

A total of 226 senior appointees and 150 qualifications development colleagues were invited to take part in the survey via a link that was emailed to all senior appointees, qualifications officers, qualifications managers, qualifications co-ordinators and subject implementation managers.

A total of 74 participants completed the survey. The sample comprised 47 (63%) senior appointees and 27 (36%) qualifications development colleagues. Almost half (46%) of the sample were people who had been in their role for six to 10 years, while 28% had been in their role for two to five years, 18% for less than two years, and 8% for more than 10 years.
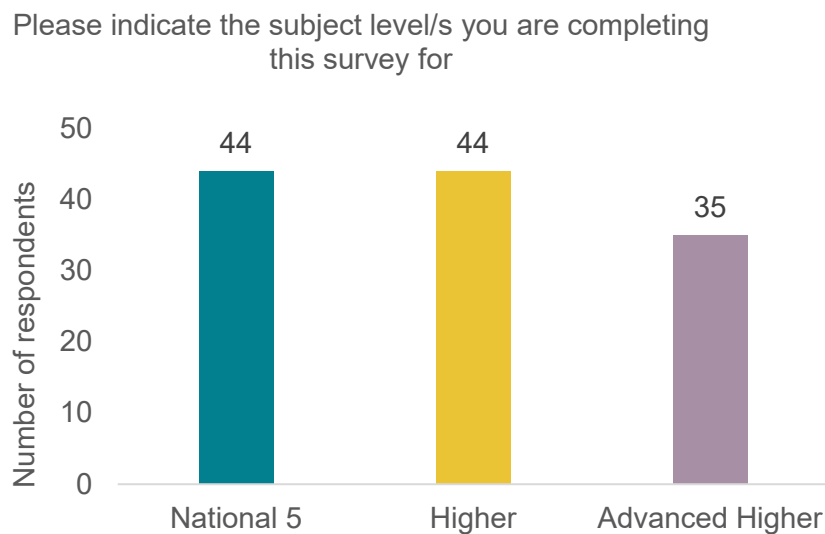
Respondents were responsible for different subjects and qualification levels. Individual subjects that respondents were assigned to were coded into the wider categories shown below. Respondents could choose more than one subject. However, some subjects were not represented by any participants in the survey. These were: Art and Design (Design), Art and Design (Expressive), Care, Design and Manufacture, Fashion and Textile, Technology, Gàidhlig, Mathematics of Mechanics, Music Technology, Music Portfolio, Photography and Politics.

Figure 1

What subject(s) are you completing this survey for?

Subject	Number of respondents
Care	1
Home Economics	4
Physical Education	1
Languages	14
Business	13
Mathematics	7
Technology	12
English	4
Creative	14
Social Science	17
Sciences	9

Number of respondents

In total, 44 respondents to the survey were responsible for National 5 subjects, 44 were responsible for Higher subjects, and 35 were responsible for Advanced Higher subjects. Respondents could choose more than one level. Responses are shown in the chart below.

Figure 2

Please indicate the subject level/s you are completing this survey for

Level	Number of respondents
National 5	44
Higher	44
Advanced Higher	35

Respondents were also asked whether they attended awarding meetings in 2023, whether they were involved in reviewing appeals in 2023, and whether they were involved in reviewing candidate scripts as part of the referral process for learners with assessment arrangements. Responses are shown in the chart below.

Figure 3

Proportion of respondents who took part in specific activities as part of the 2022–23 NQ programme
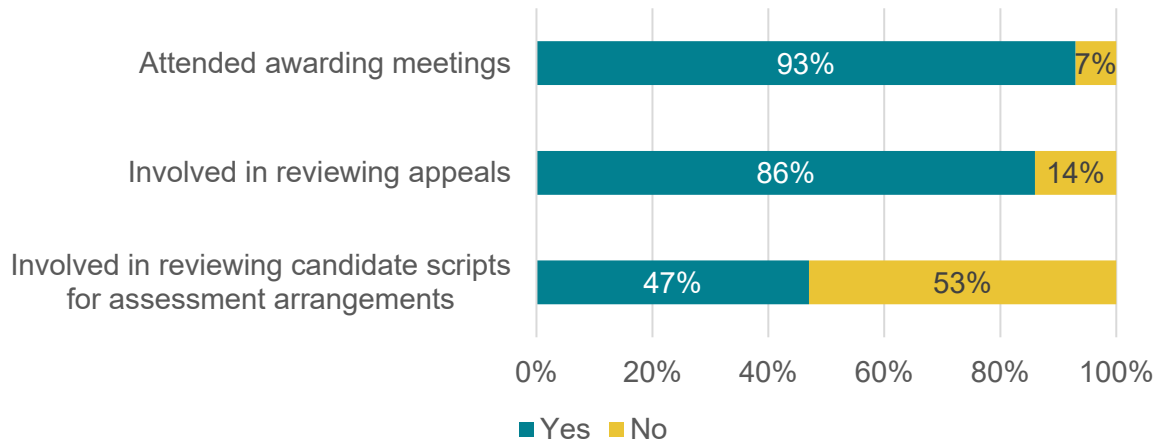
Qualitative methodology

A number of qualitative questions were included in the learner and practitioner surveys and in the SQA senior appointee and qualifications teams survey. These asked participants to, for instance, give examples of particular issues they faced, or to expand on answers given using numerical scales. This allowed us to develop a greater depth of understanding of the views of learners and practitioners.

To build on this qualitative data, and to go into more depth on the experience of the 2022–23 process, we interviewed a range of learners, practitioners, senior appointees and members of SQA qualifications teams in late 2023 and early 2024.

There were a number of objectives for these interviews. The first was to develop a fuller understanding of the experiences of those who sat, taught, assessed and awarded National Qualifications in 2022–23. Second, the interviews provided an opportunity to explore some of the issues raised in the questionnaire in greater depth. One of the advantages of this approach was that it allowed for a genuine conversation to take place to fully understand the views of participants. Lastly, the interviews gave SQA the opportunity to hear a range of different perspectives directly.

The interviews followed a semi-structured approach which aimed to allow respondents to freely share their experiences without too much direction, while still allowing the interviews to focus consistently on important aspects of the assessment approach used in 2022–23.

A total of 16 practitioners and eight learners were interviewed about their experiences of the assessment process in 2023. In addition, seven senior appointees, six qualifications development colleagues, and two interviewees who had a dual role were interviewed about their experiences. All interview participants had volunteered to be interviewed, so were self-selecting.

All the interviews were intended to add depth to the survey results and to explore areas that did not lend themselves to survey questions. These were qualitative interviews intended to illustrate a range of perspectives and were not intended to be fully representative of the wider population.

Interviews were recorded and non-verbatim transcribed. Depending on the nature of the discussion, interviews did not always follow the strict order of the questions and some answers were given in different places. Interviewers still sought to ensure that all questions were covered in every interview. Questions were grouped into key topic areas, and so the summaries of responses provided through the reports have attempted to re-order the evidence into a coherent form without changing the tone or content of the responses. Direct quotes are given in italics.

Approach to analysis

As this research used a mixed method approach, it was necessary to analyse different sorts of data in different ways.

Quantitative data

Please note that throughout the reports, in charts and text, percentages may not add up to 100% due to rounding.

Quantitative survey questions, which asked respondents to choose from two or more options or give a rating on a scale, were analysed numerically, with graphs and tables being provided where appropriate.

Learner survey respondents

A range of learner characteristic data was collected as part of their survey. This was for two main reasons: firstly, to ensure that respondents to the survey were representative, and secondly, so that we can understand how learners with different characteristics experienced the assessment process for National Qualifications in 2023. Full respondent profile information is available in the learner experiences report.

Composite analysis

When looking at responses by learner characteristic, we chose a composite approach to minimise the number of significance tests we carried out. Carrying out multiple tests has the potential to increase Type I errors. These are errors that suggest a result is indicative of a real (ie population level) effect, when in fact it exists only in the sample by chance.

Composite scores were calculated for each learner by taking the average of key questions relating to different aspects of the assessment processes in 2023. The five areas were:

♦ communications
♦ disruption to teaching and learning
♦ exam exceptional circumstances consideration service (EECCS)
♦ appeals
♦ overall process

The key questions were all answered on five-point Likert scales from 'strongly disagree' to 'strongly agree'. These were converted into numerical responses from 1 to 5 before analysis. Questions were assessed for reliability with Cronbach's alpha[13] prior to averaging, and scored above 0.7 for each composite variable. The table below details the key questions that make up the new composite variables and Cronbach's alpha scores for each of these new variables.

Table 4

Composite variable	Key questions
Communications satisfaction (Cronbach's alpha = 0.70)	♦ I received information on how my grades would be determined in 2022–23 early enough in the academic year. ♦ The assessment process for 2022–23 was communicated to me effectively. ♦ I found the Appeals 2023 booklet useful. ♦ I found it helpful to receive the Appeals 2023 booklet before Results Day.
Teaching and learning disruption (Cronbach's alpha = 0.85)	♦ Ongoing disruption due to COVID-19 in my school, college or training provider had a substantial impact on my teaching and learning experience in 2022–23. ♦ Ongoing disruption due to COVID-19 in my school, college or training provider had a substantial impact on how I was assessed in 2022–23. ♦ The pandemic continues to have an impact on my learning. ♦ I feel that the pandemic has had an effect on the development of my skills and knowledge. ♦ I feel that the pandemic continues to affect my mental wellbeing.
EECCS satisfaction[14] (Cronbach's alpha = 0.95)	♦ I understood the EECCS process in 2023. ♦ I thought the EECCS process was fair. ♦ I was satisfied with the EECCS process in 2023.
Appeals satisfaction[15] (Cronbach's alpha = 0.77)	♦ I understood the appeals process in 2023. ♦ I thought the appeals process was fair. ♦ I was satisfied with the appeals process in 2023.
Overall process satisfaction (Cronbach's alpha = 0.90)	♦ The assessment process for 2023 was fair to me. ♦ I was satisfied with the assessment process for 2023.

In the subsequent analysis, we looked for differences across different equalities characteristics: disability/ASN, ethnicity, gender, and LGBTQIA+ identity. Additionally, we looked for the impact of being care experienced, SIMD, and how learners felt about their results.

Disability/ASN was measured as a YES/NO response to the question 'Are you disabled or do you have an additional support need?'.

Gender was measured as a response to the question 'How would you describe your gender?'. Response choices were man/boy, woman/girl, non-binary, or learners could enter another term. Gender counts exclude learners who entered their own gender term in response to this question. While SQA acknowledges the importance of allowing learners to self-define in response to questions relating to gender identity, this question produced a large amount of free-text data which was extremely difficult to include in analysis.

For ethnicity, to avoid potential issues of statistical unreliability, we collapsed more detailed responses to a multi-category race and ethnicity question into two categories: minority ethnic and white. This is consistent with Scottish Government use of the term 'minority ethnic' to refer to people whose self-defined ethnicity is not white Scottish/British[16].

Minority ethnic learners, then, are those that described their identity as:

- African, African Scottish or African British
- any other African ethnic group
- Arab, Arab Scottish or Arab British
- any other Arab ethnic group
- Bangladeshi, Bangladeshi Scottish or Bangladeshi British
- Chinese, Chinese Scottish or Chinese British
- Indian, Indian Scottish or Indian British
- Pakistani, Pakistani Scottish, Pakistani British
- any other Asian ethnic group
- Caribbean, Caribbean Scottish or Caribbean British
- Black, Black Scottish or Black British
- any other Caribbean or Black ethnic group
- any Mixed or Multiple ethnic groups
- Irish
- Gypsy/Traveller/Roma
- any other White ethnic group

Ethnicity counts exclude learners who entered their own ethnicity term in response to this question. While SQA acknowledges the importance of allowing learners to self-define in response to questions relating to race and ethnicity, this question produced a large amount of free-text data which was extremely difficult to include in analysis.

LGBTQIA+ identity was measured as a YES/NO response to the question 'Do you consider yourself to be part of the LGBTQIA+ community?'.

Care experience was measured as a YES/NO response to the question 'Do you consider yourself to be care experienced?'. Care experience counts exclude learners who responded, 'I'm not sure'.

Learners' SIMD quintile was measured by converting the postcode they submitted using the Scottish Government's SIMD postcode lookup tool.

How learners felt about their results was measured by whether they said their National Qualifications results in 2023 matched, exceeded, or fell below their expectations.

For each comparison, we looked for indications of a statistically significant relationship between groups by plotting their mean scores onto a graph and looking for overlap in confidence intervals (the vertical, I-shaped error bars on each bar, below). A significant difference is indicated by error bars that do not overlap, or which overlap for less than half

their length, while error bars which overlap more substantially indicate that the groups are responding in identical ways in statistical terms[17]. Where a statistically significant difference is indicated by this process, we followed up with appropriate statistical testing to confirm it.

An example is given below. Both graphs plot differences in average scores between two groups, A and B. In the graph on the left (Example 1), the error bars do not overlap indicating that the difference between the groups is statistically significant; that is, that they meaningfully differ from each other on this measure. In the graph on the right (Example 2), the error bars overlap substantially, indicating a lack of significant difference between group A and group B.

Figure 4 Example of how to interpret 95% confidence intervals displayed as error bars. Example 1 is statistically significant at $p<0.01$, example 2 is a non-significant result.
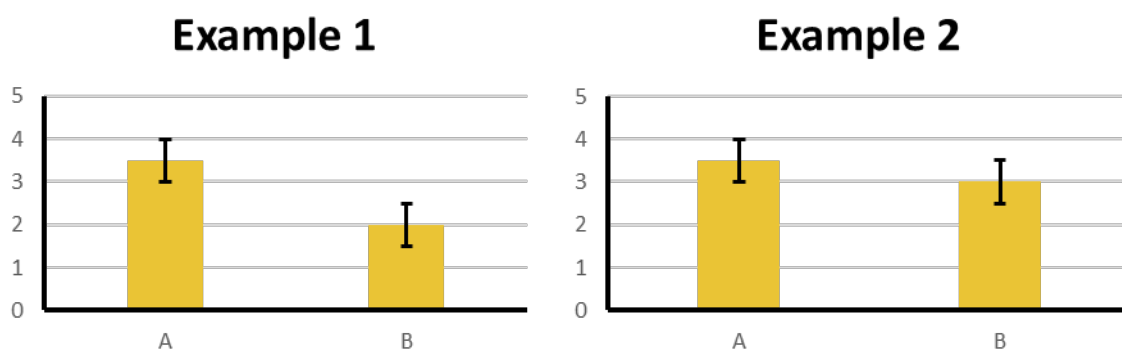
Given the number of comparisons being made in the learner analysis (six for each composite score), we set the p-value (the level at which we accept a result is statistically significant, and not merely the result of chance characteristics of the sample) at 0.01. Reducing the p-value from the commonly used 0.05 to a more conservative level is standard statistical practice when making multiple comparisons, in order to reduce the likelihood of making a Type I error, that is, concluding that a difference or relationship is meaningful beyond the immediate sample when it is not.

For each of the comparisons, respondents could only be included if they had answered all key questions for the composite measure and the relevant characteristics question. Since respondents differed in what questions they answered or skipped, the sample size changes for each analysis and may differ from overall statistics given for the whole sample elsewhere in the report. Group numbers for each comparison are given in each composite score section. The number of learners responding 'prefer not to say' to any given question is also reported, although these were not included in the statistical comparison.

Practitioner survey respondents

For practitioners, data was collected on their centre's SIMD quintile and on whether they have been an SQA appointee in the past five years or not. This cut-off was chosen to identify those who had been recently involved with SQA's assessment processes. Again, as with learners, these categories were chosen for two main reasons: firstly, to ensure that respondents to the survey were representative, and secondly, so that we can understand how practitioners in different contexts experienced the assessment process for National

Qualifications in 2023. Full respondent profile information is available in the practitioner experiences report.

Composite analysis

As with learners, when looking at responses by practitioner characteristic, we chose a composite approach to minimise the number of significance tests we carried out. Carrying out multiple tests has the potential to increase Type I errors. These are errors that suggest a result is indicative of a real (ie population level) effect, when in fact it exists only in the sample by chance.

Composite scores were calculated for each practitioner by taking the average of key questions relating to different aspects of the assessment processes in 2023. The six areas were:

♦ communications
♦ disruption to teaching and learning
♦ EECCS
♦ appeals
♦ overall process
♦ understanding assessment standards.

Key questions were all answered on five-point Likert scales from 'strongly disagree' to 'strongly agree'. These were converted into numerical responses from 1 to 5 before analysis. Questions were assessed for reliability with Cronbach's alpha prior to averaging, and scored above 0.7 for each composite variable. The table below details the key questions that make up the new composite variables and Cronbach's alpha scores for each of these new variables.

Table 5

Composite variable	Key questions
Communications satisfaction (Cronbach's alpha = 0.90)	♦ I received information on how learners' grades would be determined in 2022–23 early enough in the academic year. ♦ The assessment process for 2022–23 was communicated to me effectively.
Teaching and learning disruption (Cronbach's alpha = 0.87)	♦ Ongoing disruption due to COVID-19 in my centre had a substantial impact on teaching and learning in 2022–23. ♦ Ongoing disruption due to COVID-19 in my centre had a substantial impact on assessment in 2022–23. ♦ Many learners continue to be affected by the experience of COVID-19. ♦ Many learners are less resilient than their predecessors were prior to the pandemic. ♦ Many learners find external assessment more stressful than their predecessors did prior to the pandemic. ♦ Many learners are not as well prepared to study for National Qualifications as their predecessors were prior to the pandemic. ♦ Many learners have lower levels of focus in class than their predecessors did prior to the pandemic.
EECCS satisfaction[18] (Cronbach's alpha = 0.96)	♦ The 2023 EECCS process was fair to my learners. ♦ I was satisfied with the EECCS process in 2023.
Appeals satisfaction[19] (Cronbach's alpha = 0.77)	♦ I understood the appeals process in 2023. ♦ The 2023 appeals process was fair to my learners. ♦ I was satisfied with the appeals process in 2023.
Overall process satisfaction (Cronbach's alpha = 0.85)	♦ The assessment process for 2023 was fair to all learners. ♦ I was satisfied with the overall design of the assessment process for 2023.
Understanding assessment standards (Cronbach's alpha = 0.81)	♦ The national standard is articulated clearly in the course specification. ♦ I have a good understanding of the national standard. ♦ Understanding Standards provides teachers and lecturers with the resources they need to understand the national standard. ♦ Teachers and lecturers are given the opportunity to engage with Understanding Standards resources to enable a strong understanding of the national standard.

In the subsequent analysis, we looked for differences across different practitioner characteristics: if they had been an SQA appointee in the past five years or not, and their centre's SIMD quintile. However, as noted in the survey methodology section above, SIMD quintile 4 was dropped from this analysis.

Please see the example and technical note, above, in the learner survey respondents section, on how statistical significance was tested.

For each of the comparisons, respondents could only be included if they answered all key questions for the composite measure and the relevant characteristic question. Since respondents differ in what questions they answered or skipped, the sample size changes for each analysis and may differ from overall statistics given for the whole sample elsewhere in the report. Group numbers for each comparison are given in each section.

SQA Senior Appointee and Qualification Team respondents

Data collected from the standards strand of the survey was analysed in a number of ways.

Firstly, new variables were created in order to find relationships between different sub-groups of the sample (such as role), and how the questions were answered, enabling us to later carry out cross-tabulations. Additionally, creating other new variables (such as length of time in role) allowed us to describe the characteristics of the sample without identifying respondents, as categories with small numbers could be grouped into larger categories. To create these variables, data from the original variables were recoded into new categories. These are illustrated in the table below.

Table 6

Description of variable	New variable categories = original variable categories
Respondent's role at SQA	**Qualifications Development** = qualifications manager; qualifications coordinator; qualifications officer; subject implementation manager; other (where appropriate) **Senior Appointee** = principal assessor; depute principal assessor; other (where appropriate)
Length of time in current role at SQA in years (open text responses)	**<2** = 0, x months, 1, 1 year and x months **2 to 5** = 2, 3, 4, 5, 5 years and x months **6 to 10** = 6, 7, 8, 9, 10 **>10** = 10 years and x months, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 years
Subject respondent is responsible for	**Science** = Biology, Chemistry, Environmental Science, Human Biology, Physics **Social Science** = Classical Studies, Geography, History, Modern Studies, Philosophy, Politics, Psychology, RMPS, Sociology **Creative** = Art and Design, Dance, Drama, Media, Music, Music Technology, Photography **English** = English **Technology** = Computing Science, Design and Manufacture, Engineering Science, Graphic Communication, Practical Electronics, Practical Metalworking, Practical Woodworking **Mathematics** = Applications of Mathematics, Mathematics, Mathematics of Mechanics, Statistics **Business** = Accounting, Administration and IT, Business Management, Economics **Languages** = Chinese Languages, English for Speakers of Other Languages, French, Gaelic (Learners), Gàidhlig, German, Italian, Latin, Spanish, Urdu **Physical Education** = Physical Education **Home Economics** = Fashion and Textile Technology, Health and Food Technology, Practical Cake Craft, Practical Cookery **Care** = Care, Childcare and Development

The data for each question was then looked at descriptively using frequency tables that showed the percentage of the sample that gave responses to each category. For questions with a five-point Likert scale, the categories were combined to show all who agreed and all

who disagreed for each question by combining the proportions who selected 'strongly agree' and 'agree' and 'strongly disagree' and 'disagree'.

Frequency tables from the previous year's survey were also run to compare changes over time. Only questions that had the same wording and categories in the 2021–22 survey were analysed alongside the data from the 2022–23 survey.

Tests of statistical significance were carried out to examine the relationships between role and attitudes towards the National Qualifications approach in 2022–23, and changes over time. Significant findings are noted in the report. A relationship was considered significant if it had a p-value of <0.05. This is the most common threshold used in significance testing, and was regarded as appropriate here as fewer tests were performed on these responses than on the responses from learners and practitioners.

Qualitative data

Qualitative survey questions — which are more open than quantitative questions and ask respondents to explain what they think and why — are analysed using an inductive approach. Researchers analysed these qualitative answers by categorising responses and drawing out themes, producing codes that allowed analysis across responses. As with any other approach to analysing qualitative data, the results are contingent on how the coding is carried out. While it would be possible to provide some numerical data on these qualitative questions, there are a number of reasons why this would not be as robust as would be the case with quantitative questions.

Firstly, not all respondents choose to respond to open questions. We cannot therefore know that those who chose to respond are representative of the wider population. Secondly, most respondents focus on one or two main areas in their response. We have no way of knowing what they think about other topics. Thirdly, we cannot quantify the strength of respondents' views in the way that we would in a closed question. Lastly, we are reliant on the coding decisions made earlier in the analysis exercise.

As a result, most analysis of qualitative survey questions is discursive, and looks to summarise and discuss the reasons that respondents have provided. Generally, the most commonly cited reasons will be discussed first. The main conclusions that ought to be drawn from this sort of data are that a significant number of respondents take a particular point of view, and then an attempt may be made to further understand that point of view.

A similar approach was taken with interview responses. It should be noted that interview participants are not intended to provide a representative sample of learners, practitioners, and SQA senior appointees and qualification team members. It would therefore not be appropriate to draw any numerical conclusions from the interviews.

Having indicated some of the limitations of the qualitative data, it is important also to note its value in providing a detailed picture of the experiences of those who went through the various processes involved in the assessment of National Qualifications in 2022–23. It provides a much greater level of detail than could be gained from the quantitative survey questions, and the use of interviews allows for a dialogue with learners, practitioners, senior appointees, and SQA qualifications teams to fully understand their views and experiences.

Endnotes

[1] SQA (2022). *SQA's evaluation of the 2021 Alternative Certification Model (ACM).* Available: https://www.sqa.org.uk/sqa/101127.html

[2] SQA (2023). *SQA's evaluation of the 2022 Approach to Assessment of Graded National Courses*. Available: https://www.sqa.org.uk/sqa/105647.html

[3] Scottish Government (2020). *Scottish Index of Multiple Deprivation 2020*. Available: https://www.gov.scot/collections/scottish-index-of-multiple-deprivation-2020/

[4] SIMD quintile 1 is the 20% most deprived postcodes in Scotland, while SIMD quintile 5 is the 20% least deprived postcodes.

[5] Scottish Government (2023). *Summary Statistics for Schools in Scotland 2023*. Available: https://www.gov.scot/publications/summary-statistics-for-schools-in-scotland-2023/pages/school-teachers/

[6] Scottish Government (2023). *Pupil Census Supplementary Statistics*. Available: https://www.gov.scot/publications/pupil-census-supplementary-statistics/

[7] Scottish Government (2023). *Pupil Census Supplementary Statistics*. Available: https://www.gov.scot/publications/pupil-census-supplementary-statistics/

[8] Our survey question was deliberately designed to be open and non-intrusive. Scottish Government guidance suggests that sexual orientation questions should only be asked of those aged 16 or over. See https://www.gov.scot/publications/data-collection-publication-guidance-sexual-orientation/pages/3/

[9] Office for National Statistics (2023). *Sexual Orientation, UK: 2021 and 2022*. Available: https://www.ons.gov.uk/peoplepopulationandcommunity/culturalidentity/sexuality/bulletins/sexualidentityuk/2021and2022

[10] According to Who Cares? Scotland, Scottish Government looked after children statistics do not take into consideration circumstances such as informal kinship care. Moreover, some learners may have historic care experience even if they are not currently in care. https://www.whocaresscotland.org/

[11] Scottish Government (2023). Children's Social Work Statistics Scotland: 2021 to 2022. Available: https://www.gov.scot/publications/childrens-social-work-statistics-scotland-2021-22/documents/

[12] https://www.gov.scot/publications/scottish-index-of-multiple-deprivation-2020v2-postcode-look-up/

[13] Cronbach's alpha is a test used to estimate the reliability of a composite score. See https://www.statisticssolutions.com/cronbachs-alpha/

[14] Only for learners who had an EECCS submitted for them.

[15] Only for learners who appealed.

[16] Scottish Government (2019). *Scottish Surveys Core Questions 2018*

[17] Cumming, G (2012). *Understanding the New Statistics: Effect Sizes, Confidence Intervals, and Meta-Analysis*. New York: Routledge

[18] Only for practitioners who used EECCS.

[19] Only for practitioners who had learners who appealed.