

Scotland's Census 2021 Education Topic Report

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1. Main Points

- Information on highest level of education is widely used. The 2011 Census included a question on qualifications held.
- In the [Topic Consultation Report](#) (PDF) published in August 2016, NRS proposed to continue to collect information on qualifications held in 2021.
- This question was reviewed for 2021 to consider how to improve the data quality while maintaining continuity of the data.
- Question development focused on reviewing the format of the question to improve the respondents' understanding and ease of response, in order to reduce respondent burden, and thus improve the data quality.
- Research and analysis does support taking a question on this subject further at this stage.
- Testing has revealed that a multi-stage version of the online question produces better quality data compared to a one-step version. A multi-step version separates the response options by broad education categories: school-level qualifications, apprenticeships, further education, and higher education.
- The digital first approach for 2021 requires further development and user testing to fully understand the best way to present the questions online to maximise response, minimise respondent burden and ensure good quality data which meets user needs. An on-going programme of question development, focusing on sensitive or complex questions will further inform the specific question wording.

2. Introduction

This topic review sets out the evidence gathered in developing education questions for Scotland's Census 2021.

Question development for the 2021 Census began in 2015. An iterative and comprehensive process of user consultation, evaluation and prioritisation of user requirements, and qualitative and quantitative question testing has been carried out to inform decisions on the questions to be recommended for inclusion in the 2021 Census. More information about [research and preparation](#) and [question development](#) for Scotland's Census 2021 can be found online.

The 2021 Census will be digital first. The Census 2021 questionnaire must gather high quality data that meets user needs. More information about [key elements of the design](#) for 2021 can be found online.

Two frameworks have been published by National Records of Scotland (NRS) to evaluate the effectiveness of [question design for existing, alternative and new questions](#) (PDF) and to evaluate the effectiveness of [question design of tick box response options](#) (PDF).

Questions and their response options are evaluated against five main themes:

Strength of user need

- ✓ Data collected by the census must meet a user need for equality monitoring, policy development, resource allocation and/or service planning and delivery.

Suitability of alternative sources

- ✓ Data collected by the census must meet a user need that cannot be met elsewhere.

Acceptability, clarity and data quality

- ✓ Questions asked in the census must be acceptable to the majority of the public, clear and be designed with minimal respondent burden in order to obtain good data quality that meets user needs.

Comparability

- ✓ Data collected by the census should be comparable over time where possible, and harmonised across the UK where reasonable.

Operational considerations

- ✓ Census questions must be considered as part of the census as a whole, where effective digital and paper design, space and financial constraints must be considered. Additionally, some questions may be required for operational purposes in the process of conducting the census.

The final decision on the content of Scotland's Census 2021 questionnaire will ultimately be made by the Scottish Parliament.

As in previous years, there will be separate censuses conducted by the Office for National Statistics (ONS) in England and Wales, and the Northern Ireland Statistics and Research Agency (NISRA) in Northern Ireland. The three census offices work together to develop a set of questions that, wherever possible and necessary, will deliver harmonised outputs across the UK.

3. Background

Questions on qualifications held have been asked in Scotland's Census since 1961, with the form and content of these questions changing over the years to reflect changes in educational system and user need. The question included in the 2011 Census is shown in Figure 1.

Figure 1: 2011 qualifications held question, Scotland's Census

2011 Paper Question

23 Which of these qualifications do you have?
◆ Tick all that apply.

- ☐ O Grade, Standard Grade, Access 3 Cluster, Intermediate 1 or 2, GCSE, CSE, Senior Certificate or equivalent
- ☐ SCE Higher Grade, Higher, Advanced Higher, CSYS, A Level, AS Level, Advanced Senior Certificate or equivalent
- ☐ GSVQ Foundation or Intermediate, SVQ level 1 or 2, SCOTVEC Module, City and Guilds Craft or equivalent
- ☐ GSVQ Advanced, SVQ level 3, ONC, OND, SCOTVEC National Diploma, City and Guilds Advanced Craft or equivalent
- ☐ HNC, HND, SVQ level 4 or equivalent
- ☐ Degree, Postgraduate qualifications, Masters, PhD, SVQ level 5 or equivalent
- ☐ Professional qualifications (for example, teaching, nursing, accountancy)
- ☐ Other school qualifications not already mentioned (including foreign qualifications)
- ☐ Other post-school but pre-Higher Education qualifications not already mentioned (including foreign qualifications)
- ☐ Other Higher Education qualifications not already mentioned (including foreign qualifications)
- ☐ No qualifications

2011 Online Question

22 As you told us that you are aged 16 or over, we will now ask you questions on qualifications and employment.

23 Which of these qualifications do you have?
◆ Select all that apply.

- ☐ O Grade, Standard Grade, Access 3 Cluster, Intermediate 1 or 2, GCSE, CSE, Senior Certificate or equivalent
- ☐ SCE Higher Grade, Higher, Advanced Higher, CSYS, A Level, AS Level, Advanced Senior Certificate or equivalent
- ☐ GSVQ Foundation or Intermediate, SVQ level 1 or 2, SCOTVEC Module, City and Guilds Craft or equivalent
- ☐ GSVQ Advanced, SVQ level 3, ONC, OND, SCOTVEC National Diploma, City and Guilds Advanced Craft or equivalent
- ☐ HNC, HND, SVQ level 4 or equivalent
- ☐ Degree, Postgraduate qualifications, Masters, PhD, SVQ level 5 or equivalent
- ☐ Professional qualifications (for example, teaching, nursing, accountancy)
- ☐ Other school qualifications not already mentioned (including foreign qualifications)
- ☐ Other post-school but pre-Higher Education qualifications not already mentioned (including foreign qualifications)
- ☐ Other Higher Education qualifications not already mentioned (including foreign qualifications)
- ☐ No qualifications

The question included in the 2001 Census is shown in Figure 2. The question about qualifications held was amended for the 2011 Census. However, it is considered to be broadly comparable to the question included in census in 2001. More information about [changes for 2011](#) can be found online.

The output from the qualifications held question is highest level of qualification. Highest level of qualification is a widely used census variable. The data collected from the qualifications held question are combined and presented in four broad categories along with a category of no qualifications (see Table 1).

Figure 2: 2001 qualifications held question (paper version), Scotland's Census

34 Which of these qualifications do you have?

♦ ✓ *all boxes that apply.*

☐ 'O' Grade, Standard Grade, Intermediate 1, Intermediate 2, GCSE, CSE, Senior Certificate *or equivalent*

☐ Higher Grade, CSYS, Scottish Group Award at Higher, 'A' Level, AS Level, Advanced Senior Certificate *or equivalent*

☐ GSVQ/SVQ Level 1 or 2, SCOTVEC/National Certificate Module, BTEC First Diploma, City and Guilds Craft, RSA Diploma *or equivalent*

☐ GSVQ/SVQ Level 3, ONC, OND, SCOTVEC National Diploma, City and Guilds Advanced Craft, RSA Advanced Diploma *or equivalent*

☐ HNC, HND, SVQ Level 4 or 5, RSA Higher Diploma *or equivalent*

☐ First Degree, Higher Degree

☐ Professional Qualifications (for example, teaching, accountancy)

☐ None of these

Table 1: Output – highest level of qualification

<input type="checkbox"/> No qualifications	<input type="checkbox"/> No qualifications
<input type="checkbox"/> Level 1	<input type="checkbox"/> O Grade, Standard Grade, Access 3 Cluster, Intermediate 1 or 2, GCSE, CSE, Senior Certificate or equivalent; <input type="checkbox"/> GSVQ Foundation or Intermediate, SVQ level 1 or 2, SCOTVEC Module, City and Guilds Craft or equivalent; <input type="checkbox"/> Other school qualifications not already mentioned (including foreign qualifications)
<input type="checkbox"/> Level 2	<input type="checkbox"/> SCE Higher Grade, Higher, Advanced Higher, CSYS, A Level, AS Level, Advanced Senior Certificate or equivalent; <input type="checkbox"/> GSVQ Advanced, SVQ level 3, ONC, OND, SCOTVEC National Diploma, City and Guilds Advanced Craft or equivalent
<input type="checkbox"/> Level 3	<input type="checkbox"/> HNC, HND, SVQ level 4 or equivalent; <input type="checkbox"/> Other post-school but pre-Higher Education qualifications not already mentioned (including foreign qualifications)
<input type="checkbox"/> Level 4 and above	<input type="checkbox"/> Degree, Postgraduate qualifications, Masters, PhD, SVQ level 5 or equivalent; <input type="checkbox"/> Professional qualifications (for example, teaching, nursing, accountancy); <input type="checkbox"/> Other Higher Education qualifications not already mentioned (including foreign qualifications)

3.1 Questions in other UK 2011 censuses

One question on qualifications held was asked in 2011 Census in England and Wales, and in 2011 Census in Northern Ireland (Figure 3).

Although the data collected from the question in England and Wales, and Northern Ireland are not considered to be comparable with data collected in Scotland¹, the outputs considered to be harmonised, such that comparisons can be made across the UK.

Figure 3: 2011 Qualifications held question, England & Wales (ONS) and Northern Ireland (NISRA)

25 Which of these qualifications do you have?

➤ Tick **every** box that applies if you have **any** of the qualifications listed

➤ If your UK qualification is not listed, tick the box that contains its nearest equivalent

➤ If you have qualifications gained outside the UK, tick the 'Foreign qualifications' box and the nearest UK equivalents (if known)

- ☐ 1-4 O levels/CSEs/GCSEs (any grades), Entry Level, Foundation Diploma
- ☐ NVQ Level 1, Foundation GNVQ, Basic Skills
- ☐ 5+ O levels (passes)/CSEs (grade 1)/GCSEs (grades A*-C), School Certificate, 1 A level/ 2-3 AS levels/VCEs, Higher Diploma
- ☐ NVQ Level 2, Intermediate GNVQ, City and Guilds Craft, BTEC First/General Diploma, RSA Diploma
- ☐ Apprenticeship
- ☐ 2+ A levels/VCEs, 4+ AS levels, Higher School Certificate, Progression/Advanced Diploma
- ☐ NVQ Level 3, Advanced GNVQ, City and Guilds Advanced Craft, ONC, OND, BTEC National, RSA Advanced Diploma
- ☐ Degree (for example BA, BSc), Higher degree (for example MA, PhD, PGCE)
- ☐ NVQ Level 4-5, HNC, HND, RSA Higher Diploma, BTEC Higher Level
- ☐ Professional qualifications (for example teaching, nursing, accountancy)
- ☐ Other vocational/work-related qualifications
- ☐ Foreign qualifications
- ☐ No qualifications

¹ For more information the Office for National Statistics 2011 Census UK Comparability Report is available online at <https://www.ons.gov.uk/census/2011census/2011ukcensuses>

3.2 Alternative sources

Since 2012, a set of core questions has been used to provide information on the composition, characteristics and attitudes of Scottish households and adults across a number of topic areas, through the three largest surveys in Scotland:

- the [Scottish Household Survey](#) (SHS)
- the [Scottish Health Survey](#) (SHeS)
- the [Scottish Crime and Justice Survey](#) (SCJS)

A set of core and harmonised questions is recommended in order to provide comparable estimates across Scotland. Core questions are asked in each survey. More information about these can be found on the Scottish Government website ([Core Survey Questions](#)). The Scottish Government also produce guidance for [collecting equality information](#), including educational attainment.

Educational attainment is a core survey question in Scotland. The details of the core survey question, which is asked in an interview based survey, and the response options, are presented in a figure below (see Figure 4).

Figure 4: Qualifications held core survey question

Question:	Please look at this card and tell me which, if any, of the following qualifications you have. Answer all that apply.
Answer	<ol style="list-style-type: none"> 1. School leaving certificate, National Qualification Access Unit 16. O Grade, Standard Grade, GCSE, GCE O Level, CSE, National Qualification Access 3 Cluster, Intermediate 1 or 2, Senior Certificate or equivalent. 17. GNVQ/GSVQ Foundation or Intermediate, SVQ Level 1 or 2, SCOTVEC/National Certificate Module, City and Guilds Craft, RSA Diploma or equivalent 18. Higher Grade, Advanced Higher, CSYS, A Level, AS Level, Advanced Senior Certificate or equivalent 19. GNVQ/GSVQ Advanced, SVQ Level 3, ONC, OND, SCOTVEC National Diploma, City and Guilds Advanced Craft, RSA Advanced Diploma or equivalent 20. HNC, HND, SVQ Level 4, RSA Higher Diploma or equivalent 21. First Degree, Higher Degree, SVQ Level 5 or equivalent 22. Professional qualifications e.g. teaching, accountancy 23. Other school examinations not already mentioned 24. Other post-school but pre Higher education examinations not already mentioned 25. Other Higher education qualifications not already mentioned 26. No qualifications

The [Labour Force Survey](#) (LFS)² is the official source of employment in the UK. The survey asks a large number of questions on qualifications, including qualifications gained in the UK or elsewhere, and from what source (for example, school, college, work-related and others). Depending on responses the survey then asks what qualifications have been obtained. There are separate response options for school, college/university, work-related, government schemes and personal learning. Response options include Welsh, Scottish and International Baccalaureate as well as professional qualifications and higher level qualifications. The survey also asks which of these were obtained within the last 12 months. Further questions follow on the level of advanced qualifications held, and what subjects these include.

4. Understanding user need

4.1 Topic Consultation

National Records of Scotland (NRS) invited views on [Scotland's Census 2021 – Topic Consultation](#) (PDF) between 8 October 2015 and 15 January 2016. The consultation was a key step towards understanding what information users will need from the census in 2021 and helped to build strong cases to justify the inclusion of topics. The focus of the consultation was on information required at topic-level, not the detail of the questions that should be asked on the questionnaire.

Following the consultation, NRS worked closely with stakeholders through follow-up events, meetings, focus groups and online surveys to gather more detailed information about data requirements to ensure user needs were understood. Information about these events can be found on our [Get Involved pages](#) online.

There were 27 responses received through the topic consultation on the subject of educational attainment. A summary of these responses can be found in the [Topic Consultation Report](#) (PDF).

Respondents identified the following reasons for requiring information about qualifications held:

- informing service delivery, such as directing resources for community / adult education
- policy development
- local area profiling to understand the labour market
- development of economic strategies
- equalities monitoring
- proxy measure to identify deprivation
- monitoring the effectiveness of educational policy

It has been highlighted that the UK comparability and continuity with 2011 and/or earlier censuses are important to many users to enable trend based analysis, longitudinal research and the ability to monitor the effectiveness of educational policy.

² <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/methodologies/labourforcesurveyuserguidance>

In the [Topic Consultation Report](#) (PDF), NRS proposed to continue to collect information on qualifications held in 2021. In addition, NRS proposed to review the detail of information to be collected at this question to ensure that it meets user needs in terms of outputs and quality.

In particular, NRS proposed to consider areas highlighted by the stakeholders, such as the need to include the new National Qualifications, the review of the classification of older qualifications, and the inclusion of apprenticeships.

Some concerns were noted in the [Topic Consultation Report](#) (PDF) about the quality of qualifications data in 2011. The non-response rate to this question at 6.5%, which is higher than for the majority of other census questions. Some of the non-response with the 2011 qualifications held question is related to the number of response options and the volume of text in the question.

4.2 Further Stakeholder Engagement

An [Education and Labour Market Topic Event](#) was held on 19 December 2017. At the event stakeholders were presented with a number of options of the question on qualifications held. In order to capture the requirements of users who could not attend the event, and to capture further detailed requirements from those who did, a paper (event only) and online survey was provided. This survey was widely promoted through the Scotland's Census newsletter.

Proposed changes to the qualifications held question and stakeholders' feedback are outlined in a summary of this event available on the Scotland's Census website: [Education Topic Event Summary](#) (PDF).

An alternative version of the question on qualifications held based on the question asked in 2011 was shared at the Topic Event, and is shown in Figure 5. This version includes new Scottish qualifications, a separate tick box response option for apprenticeships, and a new order of the response options.

At the [Education and Labour Market Topic Event](#), NRS gathered feedback on three other alternative sets of questions on qualifications. These alternatives collected a reduced amount of information on qualifications, thereby reducing respondent burden. However, none of the presented versions were found to meet the majority of user needs.

Stakeholders considered all levels of highest qualification to be important to meet their user needs, and identified the following reasons for requiring details on different levels of the highest qualification held:

- No qualifications and Level 1 — service provision and informing policy aimed at getting vulnerable populations into education and/or employment
- Level 2 — local area profiling
- Level 3 and Level 4 — determining disparities in higher education in terms of geographical spread
- Level 3 — identifying groups more likely to go to college than university

Based on stakeholder feedback, NRS intend to investigate how to collect information consistent with that collected in 2011, while focusing on improving data quality.

Figure 5: 2011-style qualifications held question

Which of these qualifications do you have?

◆ Tick all that apply

- ☐ O Grade, Standard Grade, National 4 or 5, Access 3 Cluster, National 3, Intermediate 1 or 2, GCSE, CSE, Senior Certificate or equivalent
- ☐ SCE Higher Grade, Higher, Advanced Higher, CSYS, A Level, AS Level, Advanced Senior Certificate or equivalent
- ☐ Apprenticeship (including trade, advanced, foundation and modern)
- ☐ GSVQ Foundation or Intermediate, SVQ level 1 or 2, SCOTVEC Module, City and Guilds Craft or equivalent
- ☐ GSVQ Advanced, SVQ level 3, ONC, OND, SCOTVEC National Diploma, City and Guilds Advanced Craft or equivalent
- ☐ HNC, HND, SVQ level 4 or equivalent
- ☐ Other school qualifications not already mentioned (including foreign qualifications)
- ☐ Other post-school but pre-Higher Education qualifications not already mentioned (including foreign qualifications)
- ☐ Degree, Postgraduate qualifications, Masters, PhD, SVQ level 5 or equivalent
- ☐ Professional qualifications (for example teaching, nursing, accountancy)
- ☐ Other Higher Education qualifications not already mentioned (including foreign qualifications)
- ☐ No qualifications

5. Question testing

It is recognised a digital first Census for 2021 provides opportunities to improve question format online in order to minimise respondent burden and therefore improve data quality.

This section provides evidence from the question testing process carried out by NRS in the question development process for Scotland's Census 2021.

Both, cognitive testing and quantitative testing processes were used in developing census questions:

- Cognitive testing is a form of in-depth interviewing with a small number of respondents. It aims to provide an insight into the mental processes respondents use when answering questions. This helps to identify if there are any problems with a question or question design and gain an insight into the source of any difficulty respondents are having.
- Quantitative testing is undertaken primarily to identify data quality concerns. NRS included feedback questions in the quantitative testing in order to gather further information on public acceptability and to identify specific difficulties respondents faced if they were unable to answer a question easily.

In 2017 NRS commissioned ScotCen Social Research to conduct cognitive and quantitative testing of selected questions for potential inclusion in Scotland's Census 2021. Information about this testing can be found in the [2017 Cognitive and Quantitative Testing Report](#) (PDF).

5.1 Cognitive testing

During the cognitive testing two versions of the question on Qualifications held question were tested:

- a paper version where the question was presented as a one-step list of response options
- an online version where the question was presented as a multi-step question with the response options grouped

The paper question was similar to the 2011 Census question, updated to include changes in qualifications since 2011. The online question presented the same tick boxes but these were grouped under educational stage. The questions tested are shown in figures below (Figures 6 and Figure 7).

Figure 6: 2017 Cognitive Testing question – one-step paper version

17 Which of these qualifications do you have?

◆ Tick **all** that apply

- ☐ O Grade, Standard Grade, National 4 or 5, Access 3 Cluster, National 3, Intermediate 1 or 2, GCSE, CSE, Senior Certificate or equivalent
- ☐ SCE Higher Grade, Higher, Advanced Higher, CSYS, A Level, AS Level, Advanced Senior Certificate or equivalent
- ☐ Apprenticeship (trade/advanced/foundation/modern)
- ☐ GSVQ Foundation or Intermediate, SVQ level 1 or 2, SCOTVEC Module, City and Guilds Craft or equivalent
- ☐ GSVQ Advanced, SVQ level 3, ONC, OND, SCOTVEC National Diploma, City and Guilds Advanced Craft or equivalent
- ☐ HNC, HND, SVQ level 4 or equivalent
- ☐ Other school qualifications not already mentioned (including foreign qualifications)
- ☐ Other post-school but pre-Higher Education qualifications not already mentioned (including foreign qualifications)
- ☐ Degree, Postgraduate qualifications, Masters, PhD, SVQ level 5 or equivalent
- ☐ Professional qualifications (for example teaching, nursing, accountancy)
- ☐ Other Higher Education qualifications not already mentioned (including foreign qualifications)
- ☐ No qualifications

Figure 7: 2017 Cognitive Testing question – multi-step online version

Q17. Which of these qualifications do you have?

i. Which of these school (secondary or high school) qualifications do you have?

Select **all** that apply.

- ☐ O Grade, Standard Grade, National 4 or 5, Access 3 Cluster, National 3, Intermediate 1 or 2, GCSE, CSE, Senior Certificate or equivalent
- ☐ SCE Higher Grade, Higher, Advanced Higher, CSYS, A Level, AS Level, Advanced Senior Certificate or equivalent
- ☐ Other school qualifications not already mentioned (including foreign qualifications)
- ☐ No school qualifications

Q17. Which of these qualifications do you have?

ii. Have you completed a Registered Apprenticeship?

- ☐ Yes, a trade, advanced, foundation or modern apprenticeship
- ☐ No

Q17. Which of these qualifications do you have?

iv. Which of these Higher Education or professional qualifications do you have?

Select **all** that apply.

- ☐ Degree, Postgraduate qualifications, Masters, PhD, SVQ Level 5 or equivalent
- ☐ Professional qualifications (for example teaching, nursing, accountancy)
- ☐ Other Higher Education qualifications not already mentioned (including foreign qualifications)
- ☐ No Higher Education qualifications

Q17. Which of these qualifications do you have?

iii. Which of these Further Education qualifications do you have?

Select **all** that apply.

- ☐ GSVQ Foundation or Intermediate, SVQ Level 1 or 2, SCOTVEC Module, City and Guilds Craft or equivalent
- ☐ GSVQ Advanced, SVQ Level 3, ONC, OND, SCOTVEC National Diploma, City and Guilds Advanced Craft or equivalent
- ☐ HNC, HND, SVQ level 4 or equivalent
- ☐ Other post-school but pre-Higher Education qualifications not already mentioned (including foreign qualifications)
- ☐ No Further Education qualifications

Aims of cognitive testing:

- to explore whether respondents can locate their qualifications on the one-step paper version
- to explore whether a multi-step question would work online
- to explore which question (the single list or the multi-step) gives better quality data, or whether no changes in quality of response are detected

Key results of cognitive testing:

- Cognitive testing showed that there were differences in answers between the one-step paper version and the multi-step online version. Respondents provided fuller responses in the multi-step online version of the question compared to the one-step paper version.
- In the one-step paper version some qualifications were missed. This was attributed to the number of response options and the volume of text. This indicated differences in data quality between the versions, with the multi-step question capturing better quality data.
- Respondents who had no qualification were not concerned about having to answer 'No' at each stage of the multi-step online version of the question.
- There was no overall preference between the paper and online versions of the question.

Full details of the results of this testing are available in Annex A.

5.2 Quantitative testing

The one-step paper and multi-step online qualification held questions were taken forward to quantitative testing in 2017.

Following the results of cognitive testing, some minor changes were made to these questions (Figure 8 and Figure 9). Some respondents in cognitive testing questioned the difference between further and higher education or thought that it would be useful to have qualifications listed on the same screen online. Shorter lists of response options are typically better for small screen sizes like those of mobile devices. Guidance was introduced to the bottom of each online question to indicate that further qualification questions would be following.

The main aim of quantitative testing was to further examine mode effects.

Aims of quantitative testing:

- analyse the distribution of responses, including the distribution by mode
- analyse item non-response as a measure of data quality and acceptability by mode
- analyse invalid responses as a measure of data quality

Key results of quantitative testing

- Around 95 per cent of respondents provided a valid response to the question on qualification held.

- Larger proportions of respondents had qualifications in Level 4 and above and Level 3 compared to the 2011 Census. Around 15 per cent reported holding no qualifications. This is in comparison to 27 per cent of people aged 16 or over who reported holding no qualifications in the 2011 Census.
- For the working age population (people aged between 16 and 64), the Labour Force Survey (LFS), which is the official source of employment in the UK, reported 12 per cent held no qualifications, compared with eight per cent in the quantitative testing and 10 per cent in the Scottish Household Survey 2017. In the 2011 Census, 18 per cent of people aged between 16 and 64 reported holding no qualifications.
- These differences in distribution of qualifications compared to the 2011 Census may reflect changes over time and also some sample bias towards higher education levels.
- For all qualifications, a majority of respondents completed the questionnaire online. The size of this majority varied for each qualification type. The reverse was true for those with no qualifications, where the majority responded on paper (81%). However, there were also correlations of qualification and age and of age and mode.
- All invalid responses were item non-response. Item non-response was more than twice as high on paper than online. This indicates usability issues with the paper version of the question, as suggested by cognitive testing.
- In total, item non-response was around five per cent for the qualifications held question, compared to seven per cent in the 2011 Census.
- In the feedback section of the questionnaire, around three per cent of respondents indicated that they found the question on qualifications held difficult to answer:
 - respondents who completed their qualifications some time ago noted it was difficult to choose the correct tick box as they either did not remember their qualification type or were not familiar with the current terminology.
 - a number of respondents indicated confusion between further and higher education in the multi-step online version of the question. It is possible that having these listed on the same screen would assist respondent understanding.
- The majority of those who indicated they had difficulty answering the question provided a valid response.

Quantitative testing highlighted only minor issues with the multi-step online question. There were usability concerns with the one-step paper version of this question,

however, trade-offs need to be made in line with the space available for this question on the paper questionnaire.

Full details of the results of this test are available in Annex B.

Figure 8: 2017 Quantitative Testing question – one-step paper version

28 Which of these qualifications do you have?

◆ Tick all that apply

- ☐ O Grade, Standard Grade, National 4 or 5, Access 3 Cluster, National 3, Intermediate 1 or 2, GCSE, CSE, Senior Certificate or equivalent
- ☐ SCE Higher Grade, Higher, Advanced Higher, CSYS, A Level, AS Level, Advanced Senior Certificate or equivalent
- ☐ Apprenticeship (including trade, advanced, foundation and modern)
- ☐ GSVQ Foundation or Intermediate, SVQ level 1 or 2, SCOTVEC Module, City and Guilds Craft or equivalent
- ☐ GSVQ Advanced, SVQ level 3, ONC, OND, SCOTVEC National Diploma, City and Guilds Advanced Craft or equivalent
- ☐ HNC, HND, SVQ level 4 or equivalent
- ☐ Other school qualifications not already mentioned (including foreign qualifications)
- ☐ Other post-school but pre-Higher Education qualifications not already mentioned (including foreign qualifications)
- ☐ Degree, Postgraduate qualifications, Masters, PhD, SVQ level 5 or equivalent
- ☐ Professional qualifications (for example teaching, nursing, accountancy)
- ☐ Other Higher Education qualifications not already mentioned (including foreign qualifications)
- ☐ No qualifications

Figure 9: 2017 Quantitative Testing question – multi-step online version

Q28a Which of these school (secondary or high school) qualifications do you have?

- Select **all** that apply

- ☐ O Grade, Standard Grade, National 4 or 5, Access 3 Cluster, National 3, Intermediate 1 or 2, GCSE, CSE, Senior Certificate or equivalent
- ☐ SCE Higher Grade, Higher, Advanced Higher, CSYS, A Level, AS Level, Advanced Senior Certificate or equivalent
- ☐ Other school qualifications not already mentioned (including foreign qualifications)
- ☐ No school qualifications

The next questions ask about apprenticeships, further education, higher education and professional qualifications.

Q28b Have you completed a Registered Apprenticeship?

- ☐ Yes, a trade, advanced, foundation or modern apprenticeship
- ☐ No

The next questions ask about further education, higher education and professional qualifications.

Q28c Which of these Further Education qualifications do you have?

- Select **all** that apply

- ☐ GSVQ Foundation or Intermediate, SVQ Level 1 or 2, SCOTVEC Module, City and Guilds Craft or equivalent
- ☐ GSVQ Advanced, SVQ Level 3, ONC, OND, SCOTVEC National Diploma, City and Guilds Advanced Craft or equivalent
- ☐ HNC, HND, SVQ level 4 or equivalent
- ☐ Other post-school but pre-Higher Education qualifications not already mentioned (including foreign qualifications)
- ☐ No Further Education qualifications

The next question asks about higher education and professional qualifications.

Q28d Which of these Higher Education or professional qualifications do you have?

- Select **all** that apply

- ☐ Degree, Postgraduate qualifications, Masters, PhD, SVQ Level 5 or equivalent
- ☐ Professional qualifications (for example teaching, nursing, accountancy)
- ☐ Other Higher Education qualifications not already mentioned (including foreign qualifications)
- ☐ No Higher Education qualifications

This is the last question on qualifications.

6. Next steps

Research and analysis does support taking a question on this subject further at this stage.

NRS are continuing question development of a full question set for the 2021 Census and will be considering questionnaire design and respondent burden. The final decision on the content of Scotland's Census 2021 questionnaire will ultimately be made by the Scottish Parliament.

The digital first approach for 2021 requires further development and user testing to fully understand the best way to present the questions online to maximise response, minimise respondent burden and ensure good quality data which meets user needs. An on-going programme of question development, focusing on sensitive or complex questions will further inform the specific question wording.

Areas under further consideration are detailed below.

- List of qualifications

In order to reduce the volume of text within the question a number of qualifications listed in the response options of the question are under consideration. This will reduce respondent burden, particularly on the paper format.

- Apprenticeships

Development work is on-going around the inclusion of apprenticeships category. Stakeholder requests for inclusion of a separate question and/or tick box response options for different types of apprenticeships is under a review.

- Guidance

The 2017 Test did not include the guidance that is available in the census. This guidance is being reviewed for 2021, and will include information about any qualifications removed from the 2011 lists and information for those who may have completed their qualifications a long time ago.

More information about preparation for Scotland's Census 2021 and details about upcoming events can be found on the [Scotland's Census website](#), by subscribing to the [Scotland's Census newsletter](#) and following us on Twitter [@NatRecordsScot](#).

Annex A: 2017 Cognitive Testing

In 2017 NRS commissioned ScotCen Social Research to conduct cognitive and quantitative testing of selected questions for potential inclusion in Scotland's Census 2021. Information about this testing can be found in the [2017 Cognitive and Quantitative Testing Report](#) (PDF).

1. Questions tested and testing aims

One question on qualifications was tested. Two versions of this question were tested, an online version and a paper version. For the online version, the question was split over four screens, with each screen listing qualifications of different levels (school-level, apprenticeships, further education and higher education). The paper version had a single list of qualifications with no sub-headings on education level. In the cognitive interviews respondents were always exposed to the paper version of the question first.

The aims of testing these questions were:

- to explore whether people can locate their qualifications on the paper version
- to explore whether a multi-step question would work online
- to explore which question (the multi-step or the single list) gives better quality data, or whether no changes in quality of response are detected

Findings from each of these areas are described below. The questions tested are shown in Table A1.

Table A1: Questions tested on qualifications held

Online version- Four screens showing qualifications of different levels

Q17. Which of these qualifications do you have?

i. Which of these school (secondary or high school) qualifications do you have?

Select **all** that apply.

- ☐ O Grade, Standard Grade, National 4 or 5, Access 3 Cluster, National 3, Intermediate 1 or 2, GCSE, CSE, Senior Certificate or equivalent
- ☐ SCE Higher Grade, Higher, Advanced Higher, CSYS, A Level, AS Level, Advanced Senior Certificate or equivalent
- ☐ Other school qualifications not already mentioned (including foreign qualifications)
- ☐ No school qualifications

Q17. Which of these qualifications do you have?

ii. Have you completed a Registered Apprenticeship?

- ☐ Yes, a trade, advanced, foundation or modern apprenticeship
- ☐ No

Q17. Which of these qualifications do you have?

iv. Which of these Higher Education or professional qualifications do you have?

Select **all** that apply.

- ☐ Degree, Postgraduate qualifications, Masters, PhD, SVQ Level 5 or equivalent
- ☐ Professional qualifications (for example teaching, nursing, accountancy)
- ☐ Other Higher Education qualifications not already mentioned (including foreign qualifications)
- ☐ No Higher Education qualifications

Q17. Which of these qualifications do you have?

iii. Which of these Further Education qualifications do you have?

Select **all** that apply.

- ☐ GSVQ Foundation or Intermediate, SVQ Level 1 or 2, SCOTVEC Module, City and Guilds Craft or equivalent
- ☐ GSVQ Advanced, SVQ Level 3, ONC, OND, SCOTVEC National Diploma, City and Guilds Advanced Craft or equivalent
- ☐ HNC, HND, SVQ level 4 or equivalent
- ☐ Other post-school but pre-Higher Education qualifications not already mentioned (including foreign qualifications)
- ☐ No Further Education qualifications

Paper version- Single list

17 Which of these qualifications do you have?◆ Tick **all** that apply

- ☐ O Grade, Standard Grade, National 4 or 5, Access 3 Cluster, National 3, Intermediate 1 or 2, GCSE, CSE, Senior Certificate or equivalent
- ☐ SCE Higher Grade, Higher, Advanced Higher, CSYS, A Level, AS Level, Advanced Senior Certificate or equivalent
- ☐ Apprenticeship (trade/advanced/foundation/modern)
- ☐ GSVQ Foundation or Intermediate, SVQ level 1 or 2, SCOTVEC Module, City and Guilds Craft or equivalent
- ☐ GSVQ Advanced, SVQ level 3, ONC, OND, SCOTVEC National Diploma, City and Guilds Advanced Craft or equivalent
- ☐ HNC, HND, SVQ level 4 or equivalent
- ☐ Other school qualifications not already mentioned (including foreign qualifications)
- ☐ Other post-school but pre-Higher Education qualifications not already mentioned (including foreign qualifications)
- ☐ Degree, Postgraduate qualifications, Masters, PhD, SVQ level 5 or equivalent
- ☐ Professional qualifications (for example teaching, nursing, accountancy)
- ☐ Other Higher Education qualifications not already mentioned (including foreign qualifications)
- ☐ No qualifications

There were some differences in answers to qualifications held between the two versions of the question. This generally showed that respondents provided fuller responses (missed out fewer qualifications) on the online version compared to the paper version.

2. Difficulties in response mapping

In both modes respondents commented during the probing that they found it difficult to code some qualifications:

- one participant said *“I did aviation and I don't know what I can put it under...”* and therefore did not list this qualification
- one participant had a nursing degree but was not sure if this would be categorised as a ‘degree or professional qualifications’

- another participant was unsure if an MBE counted as a degree or a professional qualification and coded this qualification in the degree option
- one participant said they initially found it difficult to answer the question because they have Icelandic qualifications, however they were able to code these correctly, *"I'm glad it says foreign equivalent"*

Respondents suggested other qualifications that could be added to the response options:

- language course
- Duke of Edinburgh qualification
- military qualifications
- sign language qualifications/training;
- sporting qualifications (for example, ski instructor)

There were some cases where respondents coded different qualifications on the paper version compared to the online version. Table A2 below summarises these differences and why these occurred.

Table A2: Examples of respondents changing their answers in different versions of the qualifications held question

Differences and Difficulties in Response Options			
	Paper Response	Online Response	Reason
1	No answer provided	Q17i: O grade and SCE Q17ii: No Q17iii: No further education qualifications Q17iv: Professional	Layout of the response options. Participant said <i>"I can't even begin to go down that list, I can't do it"</i> .
2	GSVQ Foundation or Intermediate, etc. *missed degree	Q17i: Not recorded Q17ii: No Q17iii: GSVQ Foundation or Intermediate, etc. Q17iv: Degree	Participant said they preferred the paper version – although had missed qualifications. They had studied in South Africa and therefore did not recognise many of the qualifications.
3	No answer provided	No answer provided	Participant was unsure whether RAF apprenticeship training would be included under the Apprenticeship question. Additionally, they had a nursing degree but was unsure whether to place this as a degree or professional qualifications.
4	O grade, etc.; GSVQ advanced, etc.; HNC, etc.; Degree, etc.; Professional qualifications (for example teaching, nursing, accountancy)	Q17i: O grade (same as paper) Q17ii: No Q17iii: HNC (same as paper) Q17iv: Degree (same as paper)	Participant selected professional qualifications as well as degree on paper because they had not read the list of examples, which they thought was clearer in the online version.
5	O grade, etc.; SCE Higher Grade etc.; Degree, etc. *missed other Higher Education qualifications	Q17i: O grade (same as paper) Q17ii: No Q17iii: Other post-school but pre-Higher Education qualifications not already mentioned Q17iv: Degree (same as paper)	Although the participant said they found the paper version easier, they did not code their post graduate certificate/diploma. Whereas in the online version they coded this as other.

3. Locating qualifications

Respondents varied regarding how easy or difficult they found it to locate their qualifications on the paper version of the questionnaire:

- some respondents thought it was easy to locate their qualification on the one-step paper version because all the options were listed together
- some found the one-step paper version intimidating due to the volume of response options or the length of the list:

“oh my...I can't even begin to go down that list, I can't do it, I simply cannot do that question”

“I'm sure there's an easier way of asking this that doesn't require so many words”

There was one instance of non-response at the one-step paper version of the qualifications where a participant chose not to answer due to the volume of text shown.

Respondents had no issues locating their qualifications and navigating through the online version of the question. Respondents who had no qualifications said they were not concerned about having to answer 'No' at each stage of the online version.

4. Preference of Mode / Layout

There was a mix of preference between the online and paper versions of this question:

- some respondents found both layouts equally easy to answer
- some respondents found the one-step paper version easier to understand primarily because the response options were listed on one page
- some respondents preferred the multi-step online version because they thought it was *“far easier to understand”*. These respondents thought it would be easier to miss qualifications on the one-step paper version due to the long list of response options.

There were mixed views on whether the question would be easier if it was split across multiple screens or presented on the same screen. Some respondents preferred the online questions to be split over different screens and thought if only one screen was used this may be too much information. For example, one participant thought the online version *“broke it down better”* so it was *“easy to answer.”* Another said:

“...that's much easier to understand, it's differentiating between school and university”

Other respondents thought it would be useful to have the questions listed on the same screen so they do not have to refer back to the previous screens. This group suggested that having the response options on the same screen would avoid any confusion around the distinction between further and higher education.

Respondents' views on the advantages and disadvantages of both formats are summarised in Table A3 below.

Table A3: Respondents' views on the advantages/ disadvantages of each version tested

	Paper version (one-step)	Online version (multi-step)
Advantages	Respondents thought it was useful to have all the qualifications listed on one page.	<p>Easier to read/answer because the categories are split into smaller groups.</p> <p>Respondents thought this version was quicker to answer.</p> <p>Found headings useful.</p>
Disadvantages	<p>Length of the list of qualifications.</p> <p>Some respondents initially did not notice the question asked to select all that apply, they thought to only tick their highest education level.</p> <p>Some mistakes made because respondents did not read examples (may be related to the long list).</p>	<p>Some respondents found the online version repetitive.</p> <p>Some respondents questioned the difference between further and higher education – thought this may confuse respondents.</p>

5. Other comments

Respondents commented on other ways to improve the question:

- one participant said they would have preferred a response option to illustrate they were currently studying
- some respondents highlighted that they would prefer degree to be separated from master's and PhD level
- some respondents thought the distinction between 'further education' and 'higher education' could be clearer in the online version of the question

Annex B: 2017 Quantitative Testing

In 2017 NRS commissioned ScotCen Social Research to conduct cognitive and quantitative testing of selected questions for potential inclusion in Scotland's Census 2021. Information about this testing can be found in the [2017 Cognitive and Quantitative Testing Report](#) (PDF).

1. Question tested and aims of testing

One-step paper and multi-step online qualifications held questions were taken forward to quantitative testing in 2017. The question on qualifications held was included in the individual section of the questionnaire. The question asked respondents to state which, if any, qualifications they held.

Qualifications 2017 test (online)

Q28a Which of these school (secondary or high school) qualifications do you have?

▪ Select **all** that apply

- ☐ O Grade, Standard Grade, National 4 or 5, Access 3 Cluster, National 3, Intermediate 1 or 2, GCSE, CSE, Senior Certificate or equivalent
- ☐ SCE Higher Grade, Higher, Advanced Higher, CSYS, A Level, AS Level, Advanced Senior Certificate or equivalent
- ☐ Other school qualifications not already mentioned (including foreign qualifications)
- ☐ No school qualifications

The next questions ask about apprenticeships, further education, higher education and professional qualifications.

Q28b Have you completed a Registered Apprenticeship?

- ☐ Yes, a trade, advanced, foundation or modern apprenticeship
- ☐ No

The next questions ask about further education, higher education and professional qualifications.

Q28c Which of these Further Education qualifications do you have?

▪ Select **all** that apply

- ☐ GSVQ Foundation or Intermediate, SVQ Level 1 or 2, SCOTVEC Module, City and Guilds Craft or equivalent
- ☐ GSVQ Advanced, SVQ Level 3, ONC, OND, SCOTVEC National Diploma, City and Guilds Advanced Craft or equivalent
- ☐ HNC, HND, SVQ level 4 or equivalent
- ☐ Other post-school but pre-Higher Education qualifications not already mentioned (including foreign qualifications)
- ☐ No Further Education qualifications

The next question asks about higher education and professional qualifications.

Q28d Which of these Higher Education or professional qualifications do you have?

▪ Select **all** that apply

- ☐ Degree, Postgraduate qualifications, Masters, PhD, SVQ Level 5 or equivalent
- ☐ Professional qualifications (for example teaching, nursing, accountancy)
- ☐ Other Higher Education qualifications not already mentioned (including foreign qualifications)
- ☐ No Higher Education qualifications

This is the last question on qualifications.

Qualifications 2017 test (paper)

28 Which of these qualifications do you have?

♦ Tick all that apply

- ☐ O Grade, Standard Grade, National 4 or 5, Access 3 Cluster, National 3, Intermediate 1 or 2, GCSE, CSE, Senior Certificate or equivalent
- ☐ SCE Higher Grade, Higher, Advanced Higher, CSYS, A Level, AS Level, Advanced Senior Certificate or equivalent
- ☐ Apprenticeship (including trade, advanced, foundation and modern)
- ☐ GSVQ Foundation or Intermediate, SVQ level 1 or 2, SCOTVEC Module, City and Guilds Craft or equivalent
- ☐ GSVQ Advanced, SVQ level 3, ONC, OND, SCOTVEC National Diploma, City and Guilds Advanced Craft or equivalent
- ☐ HNC, HND, SVQ level 4 or equivalent
- ☐ Other school qualifications not already mentioned (including foreign qualifications)
- ☐ Other post-school but pre-Higher Education qualifications not already mentioned (including foreign qualifications)
- ☐ Degree, Postgraduate qualifications, Masters, PhD, SVQ level 5 or equivalent
- ☐ Professional qualifications (for example teaching, nursing, accountancy)
- ☐ Other Higher Education qualifications not already mentioned (including foreign qualifications)
- ☐ No qualifications

The main aim of quantitative testing was to further examine mode effects by analysing:

- the distribution of responses, including the distribution by mode;
- item non-response as a measure of data quality and acceptability by mode;
- invalid responses as a measure of data quality.

2. Qualifications distribution³

Around 95 per cent of provided a valid response to the qualifications question.

Of those who provided a valid response to the question, over half (around 56 per cent) reported holding Standard Grades, or equivalent. The second most widely reported qualifications were Highers, or equivalent, held by around 47 per cent of those who provided a valid response. Almost one third (around 32 per cent) of respondents reported holding a degree or equivalent. Proportions citing the remaining qualifications ranged from 6–22 per cent.

One in six (around 15 per cent) respondents who provided a valid response reported holding no qualifications. In the 2011 Census, 27 per cent of people aged 16 or over reported holding no qualifications.

In this testing, eight per cent of people aged 16 to 64 reported having no qualifications. This compares to 12 per cent in the Labour Force Survey (LFS) and 10 per cent in the Scottish Household Survey 2017. In the 2011 Census, 18 per cent of all people in Scotland aged 16 to 64 reported having no qualifications.

³ All figures in this report are rounded to zero decimal places.

Table B1: Valid weighted response to each qualification (%)

		%	Weighted base
Qualifications	O Grade, Standard Grade, National 4 or 5, Access 3 Cluster, National 3, Intermediate 1 or 2, GCSE, CSE, Senior Certificate or equivalent	56%	1353
	SCE Higher Grade, Higher, Advanced Higher, CSYS, A Level, AS Level, Advanced Senior Certificate or equivalent	47%	1353
	Apprenticeship (including trade, advanced, foundation and modern)	9%	1353
	GSVQ Foundation or Intermediate, SVQ level 1 or 2, SCOTVEC Module, City and Guilds Craft or equivalent	13%	1353
	GSVQ Advanced, SVQ level 3, ONC, OND, SCOTVEC National Diploma, City and Guilds Advanced Craft or equivalent	8%	1353
	HNC, HND, SVQ level 4 or equivalent	22%	1353
	Other school qualifications not already mentioned (including foreign qualifications)	9%	1353
	Other post-school but pre-Higher Education qualifications not already mentioned (including foreign qualifications)	8%	1353
	Degree, Postgraduate qualifications, Masters, PhD, SVQ level 5 or equivalent	32%	1353
	Professional qualifications (for example teaching, nursing, accountancy)	20%	1353
	Other Higher Education qualifications not already mentioned (including foreign qualifications)	6%	1353
	No qualifications	15%	1353

The output from the qualifications held question in the 2011 Census was highest level of qualification. In the 2017 Quantitative Test, larger proportions of respondents had qualifications in Level 4 and above (43 per cent compared to 26 per cent in the 2011 Census) and Level 3 (14 per cent compared to 10 per cent in the 2011 Census). A smaller proportion reported having no qualifications. Some of these differences in distribution are roughly in line with changes observed through the Scottish Household Survey (SHS), where the proportion reporting degree and

professional qualifications increased from 27 per cent in 2011 to 31 per cent in 2017, and the proportion reporting no qualifications decreased from 20 per cent in 2011 to 16 per cent in 2017.

*Table B2: Highest level of qualification, 2017 Test and 2011 Census, ages 16 and over (%)*⁴

	2017 Test (weighted)	2017 Test (weighted) %	2011 Census	2011 Census %
No qualifications	201	15%	1,173,116	27%
Level 1	204	15%	1,010,875	23%
Level 2	152	11%	627,423	14%
Level 3	194	14%	424,996	10%
Level 4 and above	578	43%	1,142,662	26%
Apprenticeship only	24	2%	N/A	N/A
Total	1353	100%	4,379,072	100%

Qualifications by mode

Overall, valid responses to the qualifications question were split evenly by mode, with 51 per cent responding to the question online and 49 per cent on paper. However, there are differences by qualification.

Of respondents who reported holding Standard Grades or equivalent, the majority (59 per cent) completed the online questionnaire, while the remainder completed the paper version. The same was true for those holding Higher Grades or equivalent (66 per cent online), SVQ level 1 or 2 or equivalent (62 per cent online), SVQ level 3 or

⁴ Highest level of qualification is defined using the following 2011 Census levels:

Level 1: 0 Grade, Standard Grade, Access 3 Cluster, Intermediate 1 or 2, GCSE, CSE, Senior Certification or equivalent; GSVQ Foundation or Intermediate, SVQ level 1 or 2, SCOTVEC Module, City and Guilds Craft or equivalent; Other school qualifications not already mentioned (including foreign qualifications).

Level 2: SCE Higher Grade, Higher, Advanced Higher, CSYS, A Level, AS Level, Advanced Senior Certificate or equivalent; GSVQ Advanced, SVQ level 3, ONC, OND, SCOTVEC National Diploma, City and Guilds Advanced Craft or equivalent.

Level 3: HNC, HND, SVQ level 4 or equivalent; Other post-school but pre-Higher Education qualifications not already mentioned (including foreign qualifications).

Level 4 and above: Degree, Postgraduate qualifications, Masters, PhD, SVQ level 5 or equivalent; Professional qualifications (for example, teaching, nursing, accountancy); Other Higher Education qualifications not already mentioned (including foreign qualifications).

Apprenticeship only are those in the 2017 Test who selected apprenticeship only, for comparison purposes between the 2017 Test and the 2011 Census figures.

equivalent (66 per cent online), SVQ level 4 or equivalent (74 per cent online) and those holding a degree or equivalent (64 per cent online). The same was also true for those holding 'Other qualifications (including foreign qualifications)' (77 per cent online for those holding other school qualifications, 76 per cent for those holding other post-school qualifications and 73 per cent for those holding other higher education qualifications).

The inverse was true for those reporting that they held no qualifications with the majority (81 per cent) completing the questionnaire on paper. However, there was also an association between qualifications and age, and also mode and age. Over half (around 57 per cent) of those reporting holding no qualification were aged 65 or above. Around 72 per cent of all respondents aged 65 or above responded on paper.

For those with an apprenticeship, the split was 55 per cent online and 45 per cent on paper. Of those holding professional qualifications, 53 per cent responded online and 47 per cent on paper.

Table B3: Qualifications by mode (as a percentage, based on weighted estimates of total valid responses)

		Mode		
		Number of responses - Online	Number of responses - Paper	Total
Qualifications	O Grade, Standard Grade, National 4 or 5, Access 3 Cluster, National 3, Intermediate 1 or 2, GCSE, CSE, Senior Certificate or equivalent	59%	41%	100%
	SCE Higher Grade, Higher, Advanced Higher, CSYS, A Level, AS Level, Advanced Senior Certificate or equivalent	66%	34%	100%
	Apprenticeship (including trade, advanced, foundation and modern)	55%	45%	100%
	GSVQ Foundation or Intermediate, SVQ level 1 or 2, SCOTVEC Module, City and Guilds Craft or equivalent	62%	38%	100%
	GSVQ Advanced, SVQ level 3, ONC, OND, SCOTVEC National Diploma, City and Guilds Advanced Craft or equivalent	66%	34%	100%
	HNC, HND, SVQ level 4 or equivalent	74%	26%	100%
	Other school qualifications not already mentioned (including foreign qualifications)	77%	23%	100%
	Other post-school but pre-Higher Education qualifications not already mentioned (including foreign qualifications)	76%	24%	100%
	Degree, Postgraduate qualifications, Masters, PhD, SVQ level 5 or equivalent	64%	36%	100%
	Professional qualifications (for example teaching, nursing, accountancy)	53%	47%	100%
	Other Higher Education qualifications not already mentioned (including foreign qualifications)	73%	27%	100%
	No qualifications	19%	81%	100%
Total valid responses		51%	49%	100%

Qualifications by age

Almost two-thirds of the total valid responses to the qualifications question were from those aged 16-54. This was also true of each of the qualifications asked about. For example, 74 per cent of those who stated they had standard grades or equivalent fell into the 16-54 age group and the equivalent figure for Highers or equivalent was 77 per cent. A similar pattern was evident for those holding degrees; instances of respondents holding degrees were much higher in the younger two age groups than among the older two (80 per cent, compared with 20 per cent).

The opposite was true for 'no qualifications'. Three-quarters (77 per cent) of those stating that they did not have any of the qualifications listed were aged 55 or above. Of those with 'No qualifications' 57 per cent were aged 65+ compared with 45 per cent in the 2011 Census. Only seven per cent of those with no qualifications were in the youngest age group (16-34 years old), compared to nine per cent in the 2011 Census.

Table B4: Qualifications held by age (as a percentage, based on weighted estimates of total valid responses)

		All people				Total valid responses
		16-34	35-54	55-64	65+	
Qualifications	O Grade, Standard Grade, National 4 or 5, Access 3 Cluster, National 3, Intermediate 1 or 2, GCSE, CSE, Senior Certificate or equivalent	34%	40%	15%	11%	100%
	SCE Higher Grade, Higher, Advanced Higher, CSYS, A Level, AS Level, Advanced Senior Certificate or equivalent	43%	34%	12%	12%	100%
	Apprenticeship (including trade, advanced, foundation and modern)	22%	24%	18%	36%	100%
	GSVQ Foundation or Intermediate, SVQ level 1 or 2, SCOTVEC Module, City and Guilds Craft or equivalent	21%	50%	20%	9%	100%
	GSVQ Advanced, SVQ level 3, ONC, OND, SCOTVEC National Diploma, City and Guilds Advanced Craft or equivalent	29%	40%	21%	10%	100%
	HNC, HND, SVQ level 4 or equivalent	44%	40%	9%	7%	100%
	Other school qualifications not already mentioned (including foreign qualifications)	38%	41%	9%	12%	100%
	Other post-school but pre-Higher Education qualifications not already mentioned (including foreign qualifications)	40%	39%	9%	12%	100%
	Degree, Postgraduate qualifications, Masters, PhD, SVQ level 5 or equivalent	44%	36%	10%	10%	100%
	Professional qualifications (for example teaching, nursing, accountancy)	22%	37%	17%	24%	100%
	Other Higher Education qualifications not already mentioned (including foreign qualifications)	34%	40%	14%	12%	100%
	No qualifications	7%	16%	20%	57%	100%
Total valid responses		31%	33%	15%	22%	100%

Table B5: No qualifications held by age from the 2017 test (as a percentage, based on weighted estimates of total valid responses) versus 2011 Census

		16-34	35-64	65+	Total valid responses
	No qualifications (2017 test)	7%	36%	57%	100%
	No qualifications (2011 Census)	9%	46%	45%	100%

3. Invalid responses to qualifications held question

If no questions later than the marital status question were answered, responses were considered to be partial completions of the questionnaire. For all questions after the marital status question, partial completions are treated as questionnaire drop out and excluded from item non-response.

An invalid response was given by seven per cent of the respondents. Most non-response at the qualifications question (around two per cent of total responses) was due to questionnaire drop-out, i.e. partially completed questionnaires.

For fully completed questionnaires, around five per cent of responses were invalid.

Invalid responses were provided both on paper and online. All invalid responses were item non-response. When looking at item non-response from fully completed questionnaires only, there appears to be a mode effect, with more than twice as much (51 cases) item non-response being attributable to the paper questionnaire, than the online questionnaire (21 cases). Such a mode difference could indicate a usability issue with the one-step paper version of the question, compared with the multi-step question asked on the online mode.

Table B6: Invalid qualifications held by mode (unweighted counts)

	Mode		
	Number of responses - Online	Number of responses - Paper	Total
Item non response – full completions	21	51	72
Item non-response – partial completions ⁵	34	0	34
Invalid multi-tick – paper only, single tick questions	0	0	0
Invalid combination	0	0	0
Routing error			
Total invalid responses	55	51	106
Not applicable			
Total valid responses	590	758	1348
Total responses	645	809	1454

When comparing item non-response from the whole sample to the qualifications question from the 2017 testing (five per cent) with item non-response at the same question from the 2011 Census (seven per cent)⁶. The similar rate of item non-response suggests that the revision to ask about qualifications in a multi-step version online appears not to have had a detrimental impact on this as a marker of data quality.

4. Feedback

The questionnaire was split into four sections online, where at the end of each of the four sections respondents were asked to state if they found any questions within the section difficult to answer and to provide verbatim feedback in an open text box on why this was the case. For the paper questionnaire feedback questions were included at the end of the questionnaire.

⁵ Partial completions are excluded from the analysis of this question and treated as questionnaire drop-out.

⁶ Note that item non-response to the 2017 test and item non-response to the 2011 census are not directly comparable; there was no questionnaire drop-out or partial completion rate estimated for the 2011 Census, which was primarily a paper questionnaire.

When asked 'Did you find any of the following questions difficult to answer: Q28. Qualifications', three per cent of respondents selected that they found the qualifications question difficult to answer.

Most of those who said they did have some difficulties answering the question provided a valid response (39 of 42 cases).