Scotland's Census 2021 Topic Event: Education and Labour Market

Tuesday 19 December

Jay Gillam and Heather Bardsley National Records of Scotland





Topic Event

- 10:00 to 11:00 Education in Scotland's Census 2021
- 11:00 to 11:15 Break
- 11:15 to 12:00 Education in Scotland's Census 2021
- 12:00 to 13:00 Lunch
- 13:00 to 14:10 Labour Market in Scotland's Census 2021
- 14:10 to 14:20 Break
- 14:20 to 15:45
- Travel to work/study in Scotland's Census 2021





What is Scotland's Census?

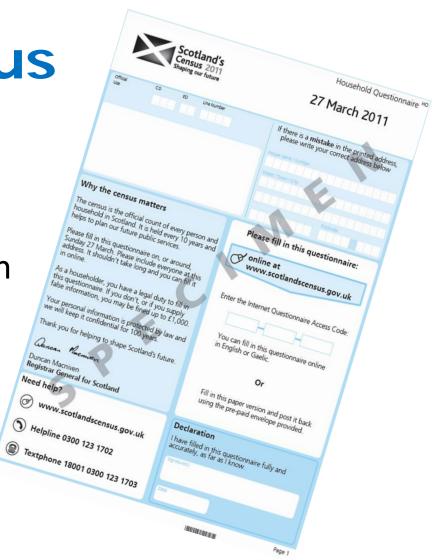
- It's unique! A household survey of everyone in Scotland, every ten years
- Paints a picture of the characteristics of our population
- Planning is well underway for 2021
- It's a huge exercise
- We have one chance to get it right!





The 2011 Census

- Demographics
- Health
- Housing and Accommodation
- Migration
- Education
- Labour Market







Users of the data

Wide variety of users:

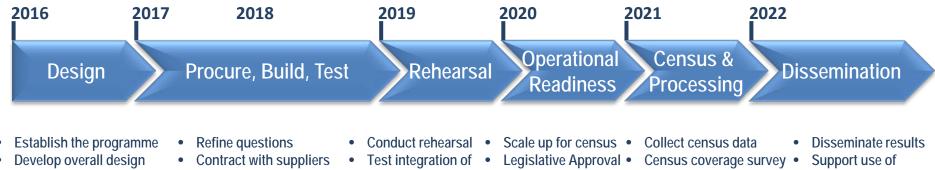
- Councils (e.g. education, transport and equality monitoring)
- Health service
- Charity/ third sector
- Commercial / private sector
- Government
- Parliament
- Research
- Media
- Public







How do we get there?



all aspects

- Engage with suppliers
- Plan for Rehearsal

- Process data
- census information

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Key design assumptions

- Primarily online
- Post-out of internet access codes to households
- March 2021
- Target response will be at household level, with individuals responding within those households
- Get first high level results out within a year





Today's event

- Follow-up to our <u>Topic Consultation</u>, published in August 2016.
- The Topic Consultation asked a range of questions about the use of census data, whether this met user need, and what additional information users would like to be included in 2021 and why.
- We would like to follow up with users, and collect more detailed information about user need from specific questions for Scotland's Census 2021.
- We will be updating users on our progress in planning for Scotland's Census 2021 as we continue this process.
- Our final recommendations for Question Content will be made to Parliament in 2018





Education in Scotland's Census

Jay Gillam National Records of Scotland





Qualifications Held

- A question on Qualifications Held has been asked in Scotland's Census since 1961.
- The form and content of this question has changed over the years.





1971-1991

- A question about degree level and professional and vocational qualifications has been consistently included but the format and content of this question has changed over time.
- School level qualifications were asked about in 1971, but not again until 2001.





2001 - 2011

Question 2001 - Scotland

34 Which of these qualifications do you have?

I all boxes that apply.



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

Question 2011 - Scotland

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

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





Output: Highest Level

The response options are used to derive five qualification levels:

No qualifications	No qualifications
Level 1	 O Grade, Standard Grade, Access 3 Cluster, Intermediate 1 or 2, GCSE, CSE, Senior Certificate 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)





Highest Qualification Level

- Data from the Qualifications held question are widely used:
 - to inform service delivery: for example, directing resources for community / adult education;
 - for policy development,
 - local area profiling,
 - to understand the labour market and
 - in the development of economic strategies
 - in equalities monitoring, and
 - as a proxy measure to identify deprivation.
- 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.





Qualifications Held

- In the Topic Consultation, it was noted that
 - the classification would need to include the new National Qualifications,
 - NRS should consider the classification of older qualifications, and the inclusion of apprenticeships; and
 - there were data quality issues with the output
- NRS proposed to
 - continue to collect information about qualifications held in Scotland's Census 2021, and
 - to review the detail of the information to be collected to ensure that it meets user needs in terms of outputs and quality.





Qualifications Held – Data Quality

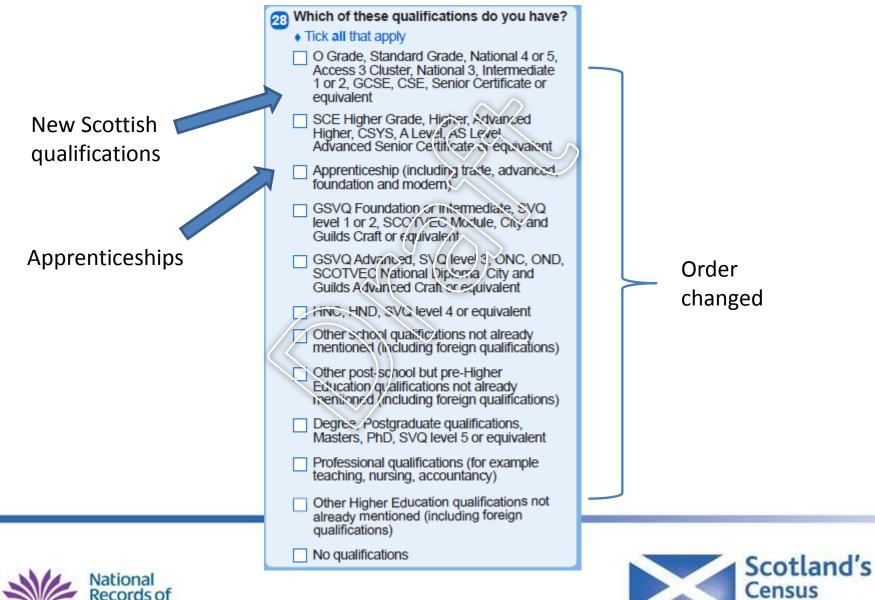
- In the Topic Consultation, some concerns were raised about the quality of 2011 qualifications data.
- The non-response rate to this question was 6.5%
- The Labour Force Survey (LFS) is the official source of qualifications data in the UK
- The 2011 census underestimated the number of people with a qualification of some sort compared to the LFS

- 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
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 - Professional qualifications (for example, teaching, nursing, accountancy)
 - Other school qualifications not already mentioned (including foreign qualifications)
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 - Other Higher Education qualifications not already mentioned (including foreign qualifications)
 - No qualifications





Qualifications 2011 style question



cotland

Shaping our future



- We are currently reviewing the Qualifications Question content and design with ONS and NISRA.
- The 2021 census will be predominantly online.
- Question design online and on paper needs to be considered.
- Questions, question content and question design need to be prioritised as part of the whole census questionnaire.





Prioritisation

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.

Lack 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 the highest possible data quality to meet 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.





The Qualifications Question

- The Qualifications Question has a medium user need compared to questions on other topics, for example ethnic group
- It takes up a lot of space for this relatively lower user need
- There are data quality issues
- We would like to reduce the space taken up and improve data quality of outputs





Census Deprivation Levels

Household deprivation classification

Definition: The dimensions of deprivation used to classify households are indicators based on four selected household characteristics. A household is deprived in a dimension if they meet one or more of the following conditions:

- employment: where any member of a household, who is not a full-time student, is either unemployed or long-term sick,
- education: no person in the household has at least level 2 education (see highest level of qualification), and no person aged 16-18 is a full-time student,
- health and disability: any person in the household has general health that is 'bad' or 'very bad' or has a long term health problem, and
- housing: the household's accommodation is either overcrowded, with an occupancy rating -1 or less, or is in a shared dwelling, or has no central heating.

A household is classified as being deprived in none, or one to four of these dimensions in any combination.





SIMD

- The Scottish Index of Multiple Deprivation is the official tool for identifying areas of multiple deprivation in Scotland
- SIMD was updated in 2016

SIMD16	2016	SIMD 2012	2012	Summary of change
indicators	Weight	indicators	Weight	
Attainment of school leavers SG, 2011/12- 2014/15	0.23	Pupil performance on SQA at stage 4 SG, 2008/9- 2010/11	0.23	The 2016 indicator considers the highest qualification a pupil leaves school with, whereas the 2012 indicator looked at the average SQA score at stage 4.







- 1. Which education levels are most vital to your work, why?
- 2. What information, if any, do you require about apprenticeships?
- 3. Do you use the census deprivation levels, if so what for?





Break





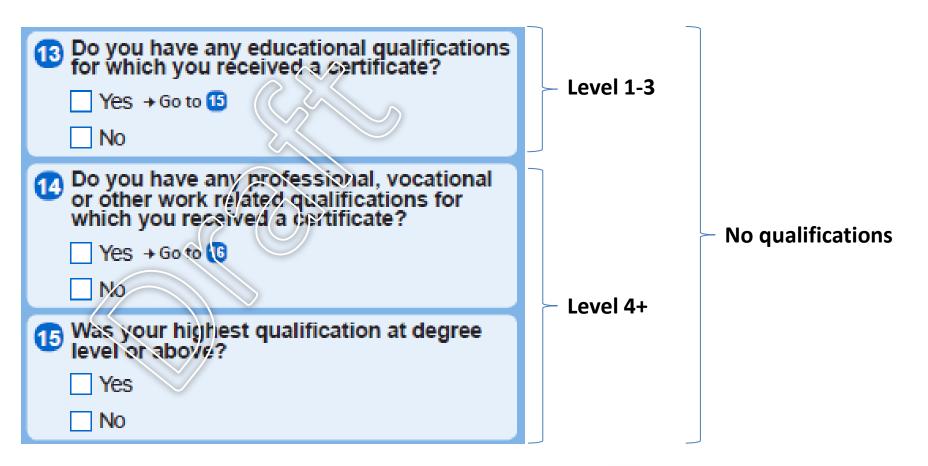


- An online survey was open prior to the event to help us gather some initial thoughts about alternative question design
- 1. Could needs be met with a reduced number of qualifications levels?
- 2. Would one of these alternative question meet your need for census data? If not, why?





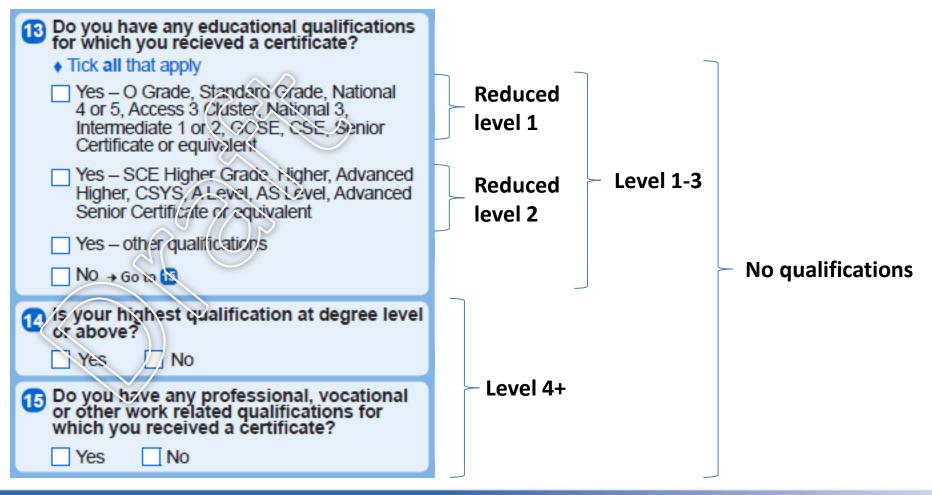
UK Harmonised Questions (A)







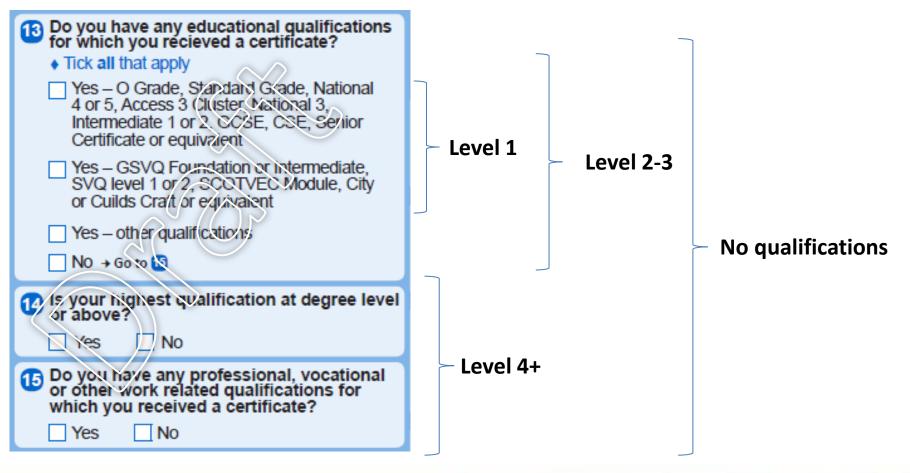
Alternative Questions (B)







Alternative Questions (C)









- 1. Could needs be met with a reduced number of qualifications levels?
- 2. Would one of these alternative question meet your need for census data? If not, why?





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Labour Market in Scotland's Census

Heather Bardsley National Records of Scotland





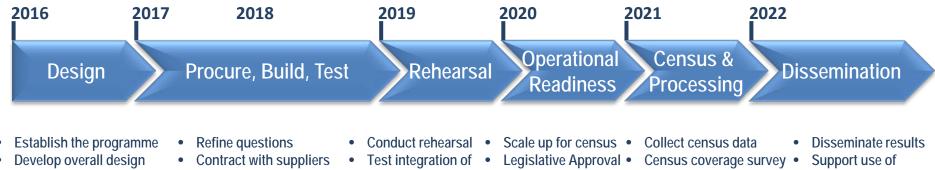
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How do we get there?



all aspects

- Engage with suppliers
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- Process data
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Agenda

13:00 to 14:10	Labour Market in Scotland's Census 2021
14:10 to 14:20	Break
14:20 to 15:45	Travel to work/study in Scotland's Census 2021





Labour Market Questions

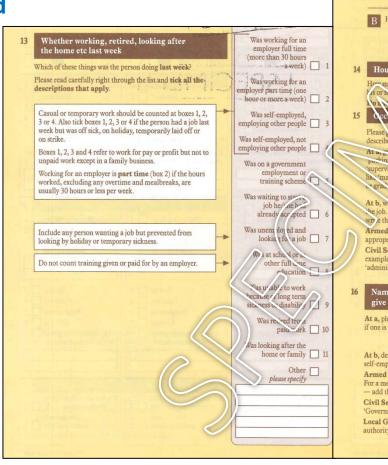
- Questions on Labour Market have been asked in Scotland's Census in some way since 1801!
- The form and content of these questions have changed over the years.

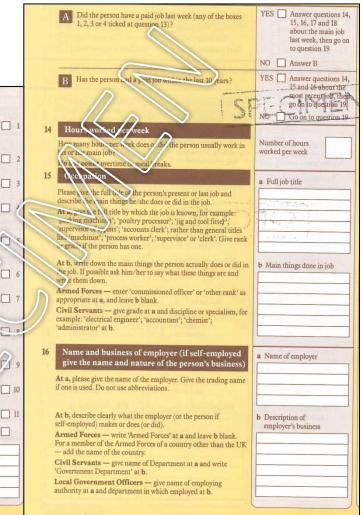




Questions were asked to capture:

- Employment Status
- Hours Worked
- Occupation
- Industry









Questions were asked to capture:

- Employment Status
- Unemployment
- Last year worked
- Ever worked
- Supervisor Status
- Organisation Size

 Description 	 If a joi hid been available last week, could you have started it within? weeks? Y-5 No V-5 No V-5 No Ves No 23 Last week, were you any of the following? 	 25 Answer the remaining questions for the main job yob the doing last week, or if not work in last week, your last week, you work as an use of the main job is the main week, you work as an use of the main week, you work as an employee or and (were) you self-employee or an and (were) you self-employee or an an
 ill, on maternity laid of . "Yes' for any provide the provident the provide the provide the provident the pr	 All the boxes that apply. Retired Student Looking after home/family Permanently sick/divalued None of the above 24 Have you ever 'worked? Yes, lease in all year you last worked No, have never worked Go to 24 	other imployees? revisor or foreman is responsible revisor or foreman is responsible revisering the work of other revisering the work of other Pres No 28 How many people work (worked) for your employer at the place where you work (worked)? If you are (were) self-employed, to show how many people you employ (employed) including yourself. 1-9 10-24 25-499 500 or more





Questions were asked to capture:

- Hours worked
- Occupation
- Industry

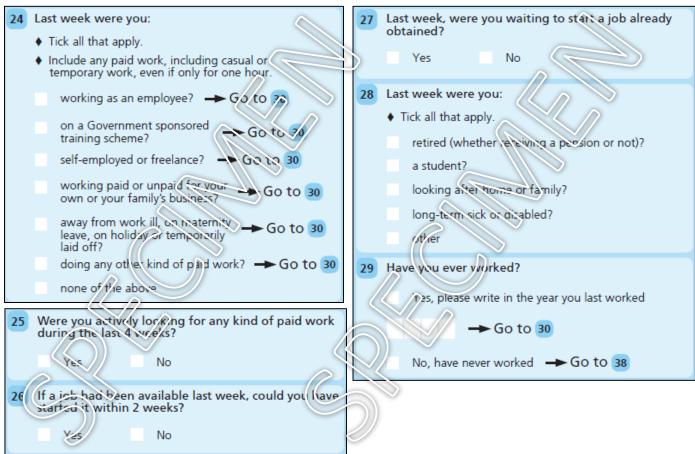
	What is (was) the full title of your main job?
	Elvil Servants, Local Government Officers - give joy the ny prade of the han
31	Describe what you do (did) in gour main) ob
	main job? Please write in o one h. Denor e appropriate. I you have you rown b mess, write in the name.
	Self-en-old-ed/freelance Work (worked) for a private individu
	What is (was) the business of the organisation which you named





Questions were asked to capture:

- Employment Status
- Unemployment
- Last year worked
- Ever worked







Questions were

asked to capture:

- Employment Status
- Occupation
- Supervisor Status
- Hours worked
- Industry

- 1 In your main job, are (were) you:
 - an employee?
 - self-employed or freelance without employees?
 - self-employed with employees?
- 32 What is (was) your full and specific job t/t/e?
 - For example, PRIMARY SCHOOL TEACHER, CAR MECHANIC, DISTRICT NURSE, STRUCTURAL ENGINEER.
 - Do not state your grade or pay band.

33 Briefly descrior what you do (aid) in your main job.

- 34 No fuid you supervise any employees?
 - Supervision involves overseeing the work of other employers on a day-to-day basis.

Yes No

35 How many hours (to the nearest full hour) a week do (did) you usually work in your main job?
♦ Include paid and unpaid overtime.
Number of hours worked in a typical week
At your workplace, what is (was) the main activity of your employer or business?

- ♦ For example, ARMED FORCES, FRIMARY EDUCATION, REPAIRING CARS, CONTRACT CATERING, COMPUTER SERVICING, DOCTOR'S SURGERY.
- If you are (were) a civil servant, please write GOVERNMENT.
- If you are (were) a local government officer, please write LOCAL GOVERNMENT and give the name of your department within the local authority.

37 In your main jr/b, what is (was) the name of the organisation yr/u work (worked) for?

 you are (were) self-employed in your own organisation, please write in the business name.

No organisation, for example, self-employed, freelance, or work (worked) for a private individual.





2011 Output

- Occupation and Industry
- Economic Activity
- National Statistics Socio-economic Classification (NS-SeC)





Topic Consultation Feedback

Responses indicated strong data need for:

- Economic Activity
- National Statistics Socio-economic Classification (NS-SeC)
- Occupation and Industry

Responses also indicated some need for:

- Hours worked
- Year last worked
- Supervisory Status





Current Work

• Currently the questions take up over a page and a half of the questionnaire

- International Labour Organisation Guidelines
- Review of the question set as a whole





Current Work

Supervisory Status

• Hours worked

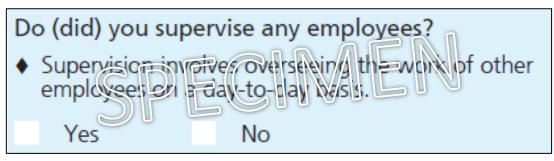
• Year last worked

• Question set as a whole





• 2011 supervisory status question asked of your main job







• Along with occupation and other variables, this fed into the National Statistics Socio-economic Classification (NS-SeC)

	If supervisor	If not supervisor	
OCC CODE=X,Y	Higher supervisory occupations	Intermediate occupations	
	Lower supervisory occupations	Lower technical occupations	
OCC CODE = P,Q,R		Semi routine occupations	
		Routine occupations	





• ONS work on Census Specific Matrix

• Labour Force Survey data and SOC (2010) Codes

• 92.6% of the 13 operational classes





• Saving space on the paper questionnaire

• UK comparability

• Consistency with 2011

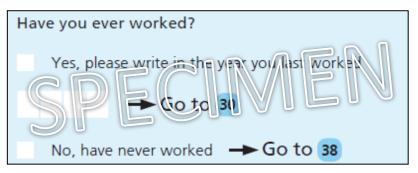
• Reviewed SOC(2020) Codes





Year Last Worked

• 2011 year last worked question asked



• Due to the way this was asked, our definition of 'long-term unemployed' differed to that of the Labour Force Survey (LFS)





Year Last Worked

		Census	LFS
2009	: October November December	Long-term unemployed	Long-term unemployed
2010	January February March		Loi une
2010 2010 2010 2010 2010 2010 2010 2010	April May June	Short-term unemployed	Short-term unemployed

- LFS: not having worked for 12 months
- Census: not having worked since 2009
- Census took place in March 2011
- Last worked in early 2010 categorised as 'short-term unemployed' even though they had been unemployed for over 12 months.





Year Last Worked

 Working with ONS and NISRA on a question which aligns our definition with the Labour Force Survey definition.

• Comparability or Continuity



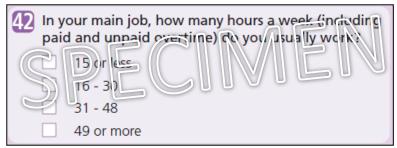


Hours Worked

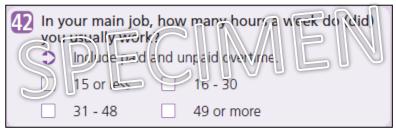
Scotland's Census 2011

35 How many hours (to the nearest full hours) a week do (did) you remainly were in your main job?
In the pain and unpaid presting.
Number of hours worked in a typical week

England and Wales 2011



Northern Ireland 2011







Hours Worked

Advantages of the NRS Question:

• More detailed data

Disadvantages of the NRS Question:

- Higher respondent burden
- Higher coding burden





Hours Worked

Is the detail in the data needed?

- 50% of tables from 2011 used the standard breakdown collect in England, Wales and Northern Ireland
- The breakdown used for Economic Activity can be created from the standard breakdown

Does the standard breakdown meet your needs?





Break

14:10 to 14:20





Travel to Work or Study in Scotland's Census

Heather Bardsley National Records of Scotland





Travel to Work/Study Questions

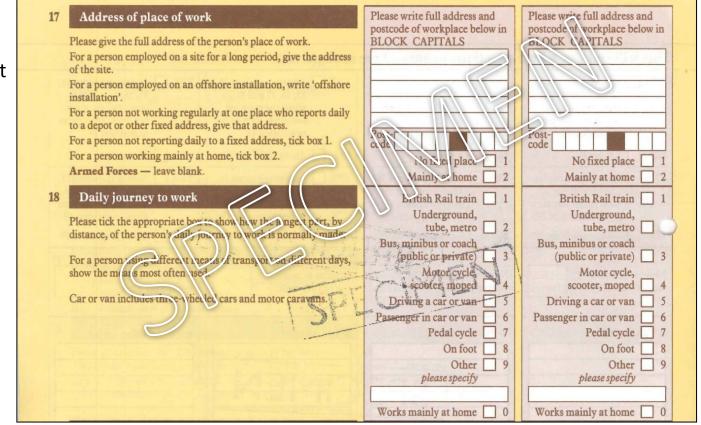
- Questions on travel to work have been asked in Scotland's Census in some way since 1951.
- In 2001 the questions were amended to ask about travel to study as well (in Scotland)
- The form and content of these questions have changed over the years.





Questions were asked to capture:

- Address of place of work
- Method of transport to place of work







Questions were asked to capture:

- Address of place of work or study
- Method of transport to place of work or study

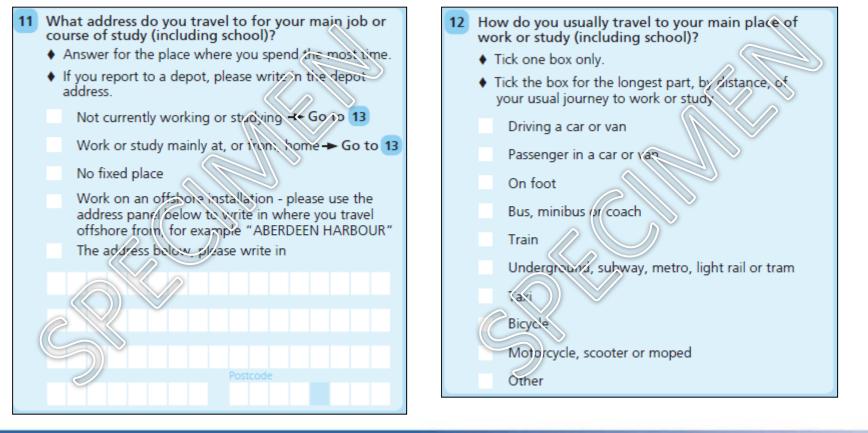
10 What address do you travel to for y (including school)?	our main job or course of study
Answer for the place where you spend m	ost time for work or story
If you report to a depot, write in depot a	ddress.
Not currently working or studying	- Go to 12
Work or study mainly at or from home	Go to
No fixed place	
Work on offshore installation please us in where you travel offshore from, f	
The address below, please write in	
	Postcode
11 How do you usually savel to your n (including school)?	nain place of work or study
w one box of w the box for the only it part, by distance, o	f your usual journey to work or study.
Underground, tute, netro or light rail	Passenger in a car or van
Train:	Motor cycle, scooter or moped
Bus, minibus or coach (public or private)	Bicycle
Taxi or minicab	On foot
Driving a car or van	Other





Questions were asked to capture:

• Address of place of work and Method of transport to place of work







Topic Consultation

- Widely used by local government and public bodies for transport planning
- Inform transport and active travel strategies which feed into policy and investment decisions
- Origin-destination statistics





Topic Consultation

- Support for separate questions on work and study
- Concern about data quality for the combined question
- Space constraints
- Better guidance and question wording

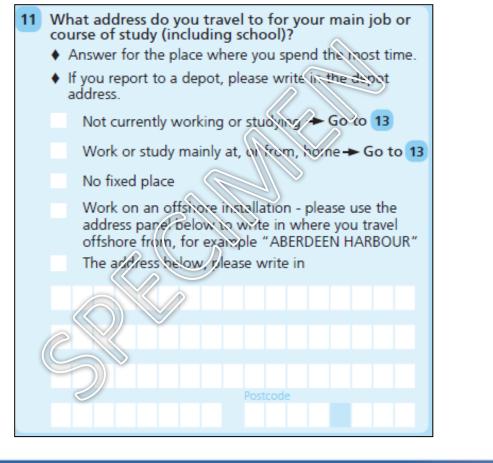








Scotland's Census 2011



Scotland's Census 2017 Testing

26 What address do you travel to for your main job or course of study (including school)?				
 Answer for the place where you spend the most time 				
 If you report to a depot, please write in the depot address 				
Not currently working or sturying, including retired → Go to 28				
Work mainly at, or from nome → ઽ੦ ៶៰ 28				
Distance learning, home schooled or equivalent → Go to 28				
No fixed place 🔹 😨				
Work on an offshure installation – please write where you travel offshore from, for example "APERDED HARBOUR"				
The address below, please write in				
Postcode				
The address entered above is my place of Work Study				





Scotland's Census 2017 Testing - Online

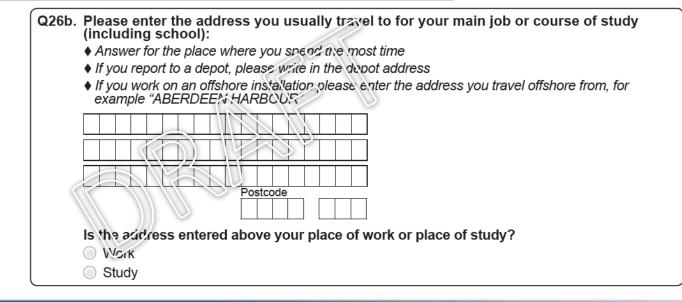






Alternative









What data is needed from the question?:

• Do we need those working offshore separated from those working onshore?

Who do we need the data from?:

- Currently we ask for the address where you spend the most time – whether it's a work or study
- Is this adding to data quality issues?





Scottish Household Survey

For the method of transport question the SHS ask:

HOW DO YOU USUALLY TRAVEL TO <u>WORK (OR SCHOOL/</u> <u>COLLEGE/UNIVERSITY IF IN FULL TIME EDUCATION)?</u>

Could we use similar wording?

What address do you travel to for your main job (or course of study if in full-time education)?

If you report to a depot, please write in the depot address

• May improve respondent understanding of how to answer





Scotland's Census 2011		Work		
		Not working	Part-time	Full-time
	Not Studying	N/A	Work	Work
Study	Part-time	Study	Whichever they do most	Work
	Full-time	Study	Study	Whichever they do most

Alternative Question		Work		
		Not working	Part-time	Full-time
	Not Studying	N/A	Work	Work
Study	Part-time	-	Work	Work
	Full-time	Study	Study	Study

- Would lose data on those studying parttime who were not working
- For those working and studying part-time the question would aim to collect their work address, no matter whether they worked or studied more.
- The opposite is true for full-time





What information is needed for people who work <u>and</u> study?

- Where they spend the most time?
- Where they work, unless they don't work and then where they study?
- Or something else?

Would changing to a question like the SHS question meet user needs?

Is there need for those who work offshore to be captured separately from those working onshore?





Method of Travel to Work/Study





Wording of Response Options

The wording of the response options has changed over time

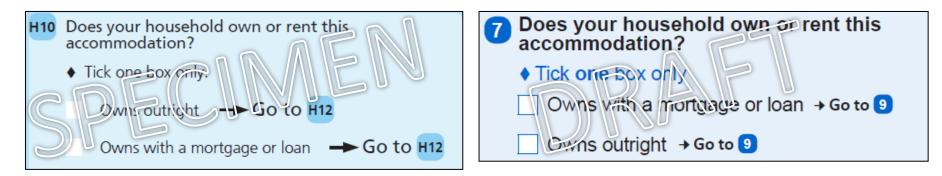
1991	2001	2011	SHS	
Driving a car or van			Driver car/van	
Pass	Passenger in a car or van			
On foot			Walking	
Motorc	Motorcycle, scooter or moped			
British Rail Train	Tr	ain	Rail	
Underground,	Underground,	Underground,	r an	
tube, metro	tube, metro or	subway, metro,	Tram	
tube, metro	light rail	light rail or tram	Underground	
Pedal cycle	Bic	ycle	Bicycle	
Bus, minibus or c	oach (public or	Bus, minibus or	School Bus	
private)		coach	Work Bus	
			Ordinary (service) bus	
	Taxi or minicab	Taxi	Taxi/minicab	
	Ferry			
	Aeroplane			
	Other			
			Other	





Order of Response Options

- population size or alphabetical order.
- For some questions the order is changed to avoid confusion.



• The transport question could be ordered by public/private transport.





Order and Wording

• Does any of the wording need amended?

• Are the groupings correct?

• Are there any response options missing?

• What order works best for the response options?





Feedback

Thank you for your input at today's event

Please complete an event feedback sheet before you leave.

If you have any questions please email us:

Education Jay Gillam – jay.gillam@nrscotland.gov.uk

Labour Market and Travel Heather Bardsley – <u>heather.bardsley@nrscotland.gov.uk</u>



