Adapting Labour Force Survey questions from interviewer-administered modes for web self-completion in a mixed-mode design

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1. INTRODUCTION

In common with many National Statistical Institutes the United Kingdom Office for National Statistics (ONS) is developing methods, processes and systems for online social surveys.

Questions on the Labour Force Survey (LFS) were originally designed to be interviewer administered. Interviewers perform important functions such as: motivation of respondents to take part in a voluntary survey; consistent administration of questions and accompanying guidance; clarification and explanation of questions and definitions to respondents. This helps to reduce respondent burden and ensure quality data. As social surveys move towards web data collection, respondents will be responsible for administering questionnaires themselves without assistance.

We cannot replace the existing interviewer-administered modes entirely, but can aim to employ a mixed mode design. This has implications for the design of the questionnaire instrument. As far as possible the data collected by different modes should be of equivalent quality, consistent within the mode and mode effects on measurement error be minimised. It is also desirable to minimise discontinuity in time series, particularly on such an important survey as the LFS where key outputs are important in monitoring the economy and informing government policy and planning. These needs have to be balanced against other important considerations such as questionnaire length, respondent burden and user experience with the aim of maximising the take-up of internet mode among the sample, reducing fieldwork costs and minimising attrition and response variability across waves. It is not simply a matter of copying face-to-face/telephone mode questions into a web instrument. We therefore developed a collaborative development process.

2. DEVELOPMENT METHODS AND ISSUES FOR CONSIDERATION

In this presentation we will discuss our ongoing qualitative work to adapt Labour Force Survey (LFS) questions from face-to-face and telephone modes into web mode. (We will not consider coverage, sampling, selection, platform architecture or survey management).

The process of adaptation has consisted of the following steps.

1. Consideration of the relative importance of the overall objectives and different design drivers to inform question design principles and development of a research

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programme. The potential drivers include: reducing data collection costs; maximising web data quality by optimising web questionnaire design regardless of other considerations; enhancing the respondent experience; and maintaining comparability by minimising mode effects between face to face, telephone and web and discontinuities to time series.

- Options ranged from unimode design where questions are as similar as possible, through to optimising for web design without being constrained by existing designs and downstream systems.

2. Prioritisation of the numerous (approximately 600) LFS questions. Not every question needs to or can have the same level of work committed to it, therefore questions have to be ranked by their importance to published outputs. It is only possible to take a limited number of variables through the development process at a time.

3. Conducting a desk review of LFS questions by data collection methodologists to identify issues and propose designs.

- The desk review compares the face-to-face/telephone question and accompanying guidance against a version copied into a web instrument with little or no adaptation. The review covers many aspects of a question, including: the question stem; the answer categories; response format (open field, radio button, check box, drop down list, look up coding frame etc); question type (open, closed etc); instructions and guidance; editing and validation checks; how to permit ‘don’t know’ and ‘refusal’ answers without their prevalence increasing.

- Proposals for changes to the design are made and issues for discussion documented. An assessment is made of potential effects on data compared with interview modes.

4. Collaborative workshops involving data collection methodologists, the programme managers overseeing the transition to mixed mode surveys, LFS managers/subject matter experts, social survey researchers, software programmers, a web user experience expert and editing and imputation methodologists, to agree programming specifications.

- The workshops considered the proposals and issues from the desk review and also overarching issues.

- The collaborative approach has brought different specialisms and perspectives together. Individuals have taken issues away for further investigation or deliberation and reported back. Work has been done as a team but rigour and challenge have been brought to the table. Lessons from international work have been used. Design issues have been discussed in a systematic way. Issues have been more likely to have been identified and addressed than if individuals had been working in isolation.

5. Cognitive/usability testing, taking the resulting initial web instrument out to members of the public to assess the effectiveness of the design. (Not all the questions that have been through the desk review and workshop process have been cognitively tested yet).

6. Subsequent review of test findings, another round of cognitive/usability testing where relevant and possible, and respecification of designs, in preparation for a quantitative test later in 2015.

The work has required close collaboration across fields of expertise, a flexible and adaptive approach, learning and changing as we go, and the need to identify, manage and document numerous issues and high volumes of detail evolving over time. Wireframes of proposed designs have been created to aid everyone’s understanding of the
specifications. Audit trail documents have been kept, recording initial reviews, proposed designs, workshop discussions, test findings, review discussions and final specifications.

3. EMERGING FINDINGS

In the presentation we will provide a few examples of the challenges faced, evolving designs, test findings and latest specifications, such as the following.

1. Making the instrument design more visually appealing and easier to use
   - The visual design and functionality of a web questionnaire is important in gaining and keeping a respondent’s attention and motivation. During the course of our development we have changed the version of the survey software used to gain more control over the visual display of the survey. We have influenced the software functionality by requesting adaptations and identifying problems to its developers. We have changed page layouts and other design features. Cognitive/usability testing has provided valuable feedback and influenced design changes.

2. Employing the advice of the web user experience expert to improve design features
   - Collaboration with a web user experience expert aided the development of the visual design and functionality. Cognitive/usability testing found that aspects of the design were not being seen or used by respondents on first sight, such as help and guidance. Following his advice we changed the font sizes and weights used for different elements of the screen and improved the presentation and usability of instructions and guidance (whether always-presented or respondent-initiated).

3. Engagement with respondents
   - Cognitive testing of a previous online pilot in 2011 indicated to us how important interviewers are in explaining to respondents the importance of the data that they are providing. In our initial web design only text was provided to explain the purpose of the LFS. In response to findings from cognitive/usability testing, along with digital publishing and design experts we created an infographic that displays high level economic activity status results from the LFS. The aim was to illustrate recent statistics about the types of data collected and explain who the users of the data are. Further cognitive testing has indicated that respondents now see more worth in what they are doing and are therefore more willing to complete the survey.

4. Using respondent feedback to clarify specific points of guidance
   - LFS questions are sometimes superficially easy to understand but actually have very specific requirements in terms of what should and should not be included in the answer or at particular response options. To be effective – noticed, read, understood and followed as appropriate - guidance needs to be easily understood and not add extra cognitive burden to respondents. Cognitive testing has provided useful feedback enabling us to improve the layout and content of guidance at specific questions.

5. Breaking-up long/complex questions
   - Results from our cognitive testing illustrated that a single question is not always the best design for respondents in terms of gathering accurate data. In our first round of testing a question was asked to determine a respondent’s economic activity status. Response categories were not mutually exclusive so respondents were instructed to select the first answer from the list. The guidance needed to clarify for all economic statuses was extensive. However respondents did not always see or follow the ‘select the first answer that applies’ instruction; some explained that they preferred to express their
opinion of their ‘primary’ status (for example ‘student’ rather than ‘employed’ even if they had a part time job), rather than follow our prescription. Therefore we split the question into two. This resulted in better quality responses, meeting data requirements while being less cognitively burdensome and allowing respondents to give answers that were more meaningful to them.

6. How to allow ‘don’t know’ and ‘prefer not to say’ responses
   o In interview modes interviewers are able to record spontaneous don’t know and refusal answers without them being presented to respondents. In web mode we need to allow these responses, for equivalence, but without increasing their prevalence due to satisficing. We utilised a method whereby these options were only presented if respondents tried to skip a question without answering it. Early cognitive/usability testing indicated that respondents were unaware they could respond in this way, so we added information about it in the general instructions at the start of the survey.

7. Streamlining the questionnaire to reduce questions and avoid confusion
   o In interviewer modes some questions are ‘ask or record’, i.e. if the interviewer has clearly established an answer from what respondent said at a previous question or in conversation they do not need to ask the question. In self-completion, this kind of question can be confusing and cause frustration and annoyance at apparent repetition. For example, there is a series of questions on a respondent’s legal marital status, whether they are cohabiting with another household member and relationships between household members (which include spouse and cohabiting partner categories). For web mode we changed the order, asking relationships first, then derived legal marital status and living as couple from relationships where this was possible to do. This results in fewer questions for some respondents and avoids confusion and frustration.

4. FUTURE WORK

It is planned that a quantitative test will be conducted in 2015. This exercise - called the Alpha pilot – is limited in extent, not a full LFS. It is intended primarily to assess 1) the level of take up of an invitation to register online to take part in the survey and collect limited information about the household and its members (known as Wave 0); and 2) take up of a subsequent invitation to those who register to take part in a cut down version of Wave 1. It will include the questions that have been through the development process we have described.

Development plans for beyond the Alpha pilot are still under consideration.

REFERENCES

