Institute of Education

Exploring the feasibility of using Qualtrics to conduct online surveys in the CLS cohort studies

By Darina Peycheva, Emily Gilbert, Matt Brown, Lisa Calderwood

CENTRE FOR
LONGITUDINAL
STUDIES

Contents

Contents

Introduction

Background

Across all the CLS cohort studies, major sweeps of data collection occur every few years and we plan to continue this approach for the foreseeable future. We are also considering supplementing these major sweeps of data collection with shorter surveys which would be administered online. Between-sweep web surveys could potentially be used to capture more frequent measures of change in key areas such as mental health, to collect more contemporaneous data following key events, both personal (such as a new birth) and external (such as elections or Brexit-related political developments). Within all age-groups of the UK population internet access is very high, and increasing, meaning that an online only surveys can feasibly reach a very high proportion of cohort members.

On our studies we send annual mailings to participants which typically include a paper reply-slip which contains the contact details currently held by CLS. Study members are asked to return the reply-slip to either confirm or correct the contact details that we hold. This is a key part of our between-sweep tracking procedures, crucial for cohort maintenance and participant engagement and retention. These mailings are conducted by CLS through an external mailing company.

Return rates of these paper reply-slips is reasonably high for NCDS and BCS70, and from the parents of MCS cohort members, though declining. For Next Steps, for whom this approach was used for the first time in 2018, this was not effective with extremely low return-rates, and we anticipate that this may also prove less effective for MCS cohort members themselves as they are now entering adulthood. Our intention is to combine between-sweep web surveys with these annual mailings, which would provide an opportunity to update contact details online, either in combination with or as an alternative to the paper reply-slips. This approach could potentially increase the numbers of participants who update their contact details each year, particularly for the younger cohorts. As invitations would be sent via email as well as post we will likely reach a greater number of those who have moved (as people do not typically change their email addresses when they move). A further advantage of the online approach is that it will also easily facilitate the collection of contact details from emigrants.

One key decision about how these between-sweep web surveys are operationalised is whether the surveys are conducted by an external fieldwork contractor or conducted in-house by CLS.

There are a multitude of commercial tools and platforms which can be used to create and manage online surveys, and which are widely used for this purpose. These are generally free or relatively low-cost to use. These software tools provide the potential for CLS to conduct these online surveys in-house. CLS has used a number of these (SurveyMonkey, SmartSurvey etc) to conduct very small scale surveys, mostly with non-study members (e.g. collecting feedback from those attending CLS events). Recent NCDS and BCS70 mailings have included links to very brief and simple web surveys collecting feedback and suggestions about participating in the study.

CLS has previously used web data collection in the context of mixed and multimode survey sweeps, and has considerable expertise and experience regarding the design and conduct of online surveys within its survey management team. However, all major web surveys have

been contracted out to fieldwork agencies. Conducting a 'full' online survey with an entire cohort would represent a significant new development.

Fieldwork agencies employ specialists with expertise in programming complex surveys using state of the art specialist and expensive data collection software (such as Blaise). Fieldwork agencies also have in place established infrastructure and quality assurance procedures to underpin their survey operations which facilitate e.g. the sending of invitations, reminders, incentives and the tracking of survey outcomes. CLS does not currently employ specialist survey programmers and does not have an operations infrastructure designed for conducting surveys. However, as our current expectation is that these online surveys would be relatively short and straightforward, it may not be necessary to use fieldwork agencies to conduct these surveys. Moreover, indicative costs from fieldwork agencies estimate the cost of conducting a single short web survey (15 minutes) with an issued sample of around 12,000 at around £60,000 (plus VAT). This does not include the cost of financial incentives which would likely be required to achieve an acceptable response rate. Although economies of scale could be achieved by commissioning multiple online surveys at once, the costs of appointing an external fieldwork agency is likely to be higher than the costs of conducting these online surveys internally[1].

For these reasons, we have decided to explore the feasibility of CLS conducting these short online surveys in-house. The survey tool we are proposing to use is Qualtrics. The main reason for this is that it is freely available for use within UCL, which has purchased on institutional licence for its use. The Department in which CLS is based has also employed a technician with Qualtrics expertise. As an initial test, the Survey Management Team programmed the young person web survey used in the most recent sweep of the Millennium Cohort Study (MCS7). This exercise suggested that Qualtrics provides most of the functionality that we would require to conduct online surveys internally, that it was easy to program, had an attractive and intuitive user-interface and supported optimised smartphone completion. In order to further assess the feasibility of using Qualtrics to conduct online surveys in-house, CLS plan to administer a short web survey of the Next Steps cohort in July 2019.

The Next Steps feasibility test

In July 2019, just over 11,000 study members will be invited to participate in a short web survey which will take 5-10 minutes to complete, as part of the annual mailing for the study. Invitations will be sent alongside a leaflet providing information about some recent findings from research based on analysis of Next Steps data. Study members will receive invitations by post and via email, two reminder emails and a final postal reminder. The web survey will be open for completion for 3 weeks. The main aim of this initial web survey will be the confirmation/collection of contact details, and these questions form the majority of the survey content. A postal reply-slip will not be incorporated, as this was not effective for this cohort in the 2018 mailing. No financial incentive will be offered. In part this is because the survey is very short and primarily consists of updating contact information. It is also because we did not have a budget for incentives, and we have not yet explored the feasibility of administering incentives in-house.

---

[1] Conducting the surveys internally would have different financial implications for the university than contracting an external agency. Under ESRC grant-funding rules commissioned surveys are treatable as Exceptions and funded at 100%, but this is not the case for in-house surveys.

A randomised experiment will be included which will vary the invitation message and content of the survey. One group will simply be asked to update their contact details, as this will provide a baseline estimate of the effectiveness of this approach for updating contact details online with no incentives for this cohort. A second group will be asked to update their contact details and to answer some feedback questions about how they would like the study to develop in the future. These questions complement the qualitative research being conducted with cohort members on our studies. The third group will be asked to update their contact details and answer some questions about their views on living in the UK today. These questions cover attitudes, political interest, voting and opinions on Brexit, as well as future aspirations. There are a relatively small number of extra questions, approx. 3-5 minutes. The aim of the experiment is to assess whether the inclusion of additional questions and differential invitation messaging increases the proportion updating their contact details and if so, which of the two alternatives is more effective. We should also note that we have not framed these questions as a 'survey' in our participant facing materials, in part as it is very short and comprises mostly of updating contact details, and in part as the Next Steps cohort have always received incentives for conducting surveys, and we are not providing an incentive for this exercise.

The survey has been programmed successfully and most of the decisions relating to the data collection approach have now been taken.

Prior to launch, the web survey will be rigorously tested within CLS. We will test the web survey itself (questions, routing, incorporation of feed-forward data etc.), log-in and verification procedures, optimisation for multiple device types (desktops, tablets, mobile phones) and browsers, the sending of email invitations and reminders, collecting information about email bounce-backs, the upload of feed-forward data to Qualtrics and the download of data from Qualtrics. Initial testing has now been completed, primarily by the Survey Management Team. A full internal 'dress rehearsal' test will also be conducted with approximately 10-20 internal staff members.

Following internal testing, 500 study members will be invited to take part in a 'soft launch' which will serve as a final test of technical and operational aspects of the survey before the full launch.

We anticipate that the Next Steps web survey feasibility test will be successful. We are uncertain what the return rate will be, particularly as we are not using incentives, though as we have noted the primary aim is increase the number of cohort members updating their contact details. At present, we anticipate that the information collected will be used for internal purposes only, and not made available for use by external researchers.

We plan to conduct another online survey of the MCS cohort at the end of 2019. This survey will be longer (20 minutes), with a greater amount of scientific content, and will include an experiment on the use of incentives.

This report seeks to provide a summary of what has been established about the feasibility of using Qualtrics to conduct online surveys of the CLS cohorts so far. A number of issues are currently still under investigation, and further evidence on feasibility will be provided by the implementation of this web survey in July and August 2019.

Findings so far

Questionnaire programming

As noted above, the Next Steps survey has now been programmed. The programming work has been conducted by members of the CLS Survey Management Team, who attended a Qualtrics training course within UCL. Programming and testing of the survey has taken place over approximately two months. Qualtrics has a user-friendly interface and to program a short and simple questionnaire is quick and straightforward. However, it should be noted that CLS surveys, including the Next Steps web survey, are not simple questionnaires. The Next Steps survey is short, and the feedback and scientific questions are relatively straightforward but the collection of contact details is complex. The complexity is due to the need to 'feed-forward' the contact details held by CLS into the questionnaire so that the information can be checked and if necessary updated by the cohort member, which requires relatively complex routing and programming (in part as the available contact information to be fed forward is variable), as well as non-standard fields e.g. for addresses, telephone numbers etc, and checks. As the survey contains this personal identifying data, both fed-forward and collected afresh, it is also very important to ensure that this personal information is held securely and confidentiality throughout the process, and that robust verification steps are included to ensure that personal data is 'fed-forward' to the correct individual.

As will be discussed below, Qualtrics can provide this functionality, but establishing how to do it has involved a major investment of survey team time. Those programming the survey have had to learn how to use Qualtrics within a very short time-span.

In Table 1 below, we have provided an evaluation of the functionality of Qualtrics software, based on our experience so far, compared against the requirements of data collection software that we typically state in the invitations to tender we use when appointing a survey agency to conduct a survey on our behalf. However, as noted earlier, we do not expect that the between-sweep web-surveys will necessarily need to be as complex as the major sweeps, so these requirements should be viewed as a 'high-bar' for evaluation.

Table 1: Qualtrics ability to meet CLS requirements for data collection software (for main sweeps)

Requirement	Functionality
Must be able to handle extensive and complex routing including repeated sets of questions	When programming questions in Qualtrics one must select from a range of question types (e.g. numeric, open-text, grids). The number of question types is quite extensive, but there is not huge flexibility with regard to the presentation of question text and response options. At times it is therefore necessary to make design decisions based on the functionality of the system rather than optimal questionnaire design.
	The limitations of Qualtrics when it comes to routing have not yet been fully explored as there is relatively little complex routing used in the Next

	Steps survey. The most complex aspect of the survey is the contact information module – which needs to route study members differently depending on what contact information has previously been collected. This has been programmed successfully. Qualtrics does have functionality to randomise question order – but a limitation is that this can only be done if randomised questions appear on the same page. Best practice in web survey design is to limit to one question per page so as to reduce the need for scrolling. It is not clear that Qualtrics could be used to program complex loops such as those used in our major surveys to collect activity histories, or a complex household grid.
Make extensive use of textfills	Qualtrics does have a 'piped text' feature which we are using to incorporate contact details we hold already into the questionnaire. Qualtrics can easily incorporate responses from previous questions into question text too. Our major surveys often use complex derived variables to set the text for textfills. We have yet to establish whether this would be possible in Qualtrics.
Make use of help screens or other facilities designed to provide additional information to interviewers	Help-screens cannot straightforwardly be incorporated into Qualtrics (although this has not been necessary for this particular survey).
Make extensive use of consistency checks	Our major surveys contain a vast number of soft and hard checks. Qualtrics does have some 'check' options but they have been found to be quite limited. In the contact module, the checks on the format of email addresses entered work well, but we have been unable to create useful checks on telephone numbers or addresses which is a potential limitation and may affect the quality of the data collected. Where checks are triggered it is not always possible to amend the message that is displayed.
Allow interviews to be suspended and resumed	Qualtrics functionality does allow this.
Make extensive use of information from prior follow-ups, i.e. feed-forward data.	Qualtrics does have the functionality to upload a data file containing 'feed-forward' data. The Next Steps web survey is feeding-forward contact details for confirmation or correction. In addition, variables in the file are being used to route study members to different parts of the questionnaire.

Mobile phone optimisation

Qualtrics has built in mobile phone optimisation. When previewing the questionnaire on a computer or laptop, an image of a mobile phone screen is displayed which shows how the survey will appear on a phone. The Next Steps web survey is being tested on a full range of devices and browsers. No issues have been observed. The survey works well on mobile devices, looks good and is easy to use.

Look and feel

Qualtrics has some flexibility with regard to changing the look and feel of the survey. One can incorporate logos and change the colour and fonts used for questions and response options. For Next Steps we have incorporated the study logo.

Operational issues

Invitations

CLS will typically wish to send invitations to complete web surveys via letter and email. Email invitations can be sent from Qualtrics (and will be for the Next Steps survey). Qualtrics's piped text feature can be used to 'mail-merge' respondent specific text features such as a unique ID or a name to be used in the greeting. As Qualtrics is used exclusively for online surveys, the system is built around email addresses. As such, when uploading the sample file, an email address is required for all cases. In the case of the cohort studies we do not hold email addresses for all study members so this is problematic. To work around this we have had to create false 'test' email addresses for all those with no email address.

Bounce-backs

Qualtrics provides a bounce-back report if email invitations cannot be delivered. CLS intends to use this report to update our database to remove invalid emails.

Reminders

Qualtrics can (and will) be used to send email reminders. Qualtrics keeps a record of those who have completed the survey, so that reminders can easily be sent to all those who have not responded by a particular date. CLS often use text/SMS reminders for web surveys too – Qualtrics does not have this functionality directly (although it is straightforward to export a list of cases who have not completed the survey so that this could be done via another provider).

Verification / authentication

All web surveys conducted by CLS will likely involve the confirmation/correction of contact details (and potentially other personal information). As such it is vital that an appropriate verification system can be put in place to ensure that study members only get to see their own details. We have been able to replicate the verification / replication approach used by the fieldwork agencies when conducting web surveys for NCDS and Next Steps. Email invitations will include an individual link to the survey and postal invitations will include a generic link. Letters and emails will both include a unique ID which must be entered (which must match the date of birth on file). This approach has been approved by the UCL data protection office.

Data export and processing

When working with the fieldwork agencies, specifications are agreed with regard to how the data delivered at the end of the project. Qualtrics will be far less flexible in this regard and the data file exported from Qualtrics is likely to need manipulation in order to make it fit for importing into CLS systems. This process will be tested as part of the Next Steps feasibility test.

Paradata

It is possible to obtain basic paradata from Qualtrics including information about browser used, screen resolution and screen size. Further investigation into other types of paradata that can be obtained is required.

Incentive administration

As noted above, no incentives will be used for the Next Steps web survey but it is planned that incentives will be sent to those taking part in the MCS web survey later in the year. UCL has a licence for a piece of software called 'Subject Pool' which can be linked to Qualtrics to administer incentives. This will be investigated further prior to the MCS web survey later in the year.

Data protection

It is of vital importance that all personal information is held securely and confidentially throughout the survey process.

The data file containing personal details will be uploaded to Qualtrics via HTTPS by a member of the cohort maintenance team from our secure server. The verification process described above will ensure that study members will only have access to their own personal details. On completion of fieldwork, the data will be downloaded from Qualtrics by the cohort maintenance team. Substantive data will be split from contact details and stored by the CLS data team.

Considerable time has been invested by the CLS Information Security lead and the Survey Management Team in assessing the potential risks to personal information associated with the use of Qualtrics and developing procedures to keep these risks to a minimum. The planned approach has been given ethical approval by the IOE Research Ethics Committee, the project has been registered with the UCL Data Protection Office who have also reviewed and approved a Data Protection Impact Assessment. A further information security risk assessment will be conducted by the UCL Information Security Group.

Conclusion

Developing the Next Steps web survey in Qualtrics has been a steep learning curve over the last few months which has used considerable staff time in both the survey management team and the cohort maintenance team. However, many of the lessons learned will be applicable to future surveys, which will benefit from the expertise and experience gained for Next Steps.

Qualtrics does lack flexibility in certain areas, particularly with regard to the presentation of question and answer formats and with validation checks. This means that questionnaire design is not always fully optimal and may mean that the data obtained may be of slightly lower quality than that obtained from surveys programmed using more advanced data collection software.

As noted above, the Next Steps data collection has yet to happen so our experience of doing this over the next few months will have a major impact on our assessment of its feasibility.

With these caveats in mind, our current assessment is that Qualtrics does have the potential to allow CLS to conduct between-sweep web surveys in-house. We have successfully programmed the relatively complex collection of contact information, which is an important requirement for any online survey within a longitudinal study. For future online surveys, we would need to consider carefully what content to include and the functionality of Qualtrics (as well as the resource implications of programming more complex content) would need to be considered in relation to the choice of content. Our initial assessment is that it is unlikely that Qualtrics would be a feasible option for programming surveys of the complexity which is typical for the major sweeps.