

10 years of communication experiments at Statistics Netherlands

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Abstract

From 2005 onwards, web data collection is used as the most common way for data collection within Statistics Netherlands. After a series of experiments and parallel data collection with other modes as CAPI and CATI, the CAWI approach became common practice. For the LFS, web data collection was implemented in 2012. In the absence of an interviewer, the advance letters are of great importance.

This paper describes how the advance letters of Statistics Netherlands are composed, tested and how the view on advance letters and testing has changed in the past 10 years.

Keywords: CAWI, experiments, advance letters, communication, response

Introduction

In the absence of an interviewer, the only way to invite persons or households to participate in surveys is via traditional mail. There is no register of e-mail addresses available at Statistics Netherlands. With mail being the only way to reach out to potential respondents in a non-CAPI/CATI design, this letter is the only way of communicating and thus is of great importance (e.g. De Leeuw, Callegaro, Hox, Korendijk, & Lensvelt-Mulders, 2007; Dillman, 2000; Goldstein & Jennings, 2002; Luiten 2011; Yammarino, Skinner & Childers, 1991).

Where CAWI (web data collection) as a data collection method was extensively tested before it was implemented, the advance letter design received much lesser attention. The old letter was long (about 1,5 page) and used quite complicated language. The length of the letter was the effect of all of the extensive information that was included. It used a not very tempting introduction into the survey and the explicit request to log in onto the questionnaire. After the introduction, there was some explanation about the sample and how we reached out to the specific person. Next, the web address, with login code and credentials were presented in the text and the rest of the letter contained information about privacy and a statement that the survey would be linked with other administrative records (informed consent).

In 2013, an external communication bureau was asked to redesign the letter, together with methodologists and experts from the statistical department. Without extensively testing, the letter was put into the field with disappointing results. The response rate dropped from 30% to 20% (Luiten and de Groot, 2014).

Further examination by qualitative interviewing was undertaken to understand these results. In this qualitative study the majority of the participants preferred the new letter and 45% said they would participate against 33% with the old letter. With the qualitative analyses pointing in the opposite direction, it was clear that there was need for a different approach if we wanted to improve the advance letters. This paper describes the systematical approach that was taken. In an extensive series of experiments each aspect of the advance letter was studied and then adjusted by a team of experts and quantitatively tested. In the remainder of this paper we describe a number of the experiments we performed.

Method

For this series of experiments, the first wave of the Labour Force Survey (LFS) was used. The LFS used an address sample at the time of the experiments. The complete sample is invited via an advance letter in week t , followed by reminders in week $t+2$ and $t+4$. After sending out the second reminder

the web questionnaire remains open for 2,5 weeks, giving people enough time to participate. The LFS first wave sample consisted of 11.000 persons per month. 10% of the total sample was used for the letter experiments, 1.100. This created enough power for statistical analyses, comparing this experimental 1.100 with the control group of 9.900.

Using the LFS might be a little sub-optimal, because the letters are addressed 'to the inhabitants of *address*', instead of personalized addressing. This makes it less clear who opened the letter, who read it and who the person was that made the decision whether or not to participate. However, the LFS was chosen because it was the only survey that is large enough to allow a substantial experimental sub-sample, with minimal risk of harming the target variables. Also, this group of 1.100 households is big enough to look at the response rates of subgroups.

An team of experts was formed to do the adjustments of the letter, section by section. The team consisted of people from the data collection department, data collection methodologists and communication experts. The variations on the original letters described here also affect the design of both reminders. Promising results were replicated in the LFS for additional detail, and also in person sample surveys.

There were 15 experiments conducted in this LFS setting over the past years, but not all of them led to implementation because of disappointing results on response rates. Only the experiments that have led to an implementation in the LFS letter will be discussed here. There were 4 experiments that drastically impacted the design of the original letters:

1. Overall simplified linguistic level
2. More and strengthened persuasion arguments
3. Visually changed log-in information
4. Shorter informed consent

As far as this was possible within the practical context of Statistics Netherlands, the Cialdini principles of persuasion were applied, being: reciprocity, commitment, social proof, authority, liking and scarcity. In the next section is stated which principle lies underneath each adjustment.

1. Simplified linguistic level

The Common European Framework of Reference for Languages (CEFR) is an international standard for describing language ability. It describes language ability on a six-point scale, from A1 for beginners, up to C2 for those who have mastered a language. The Dutch government advocates using level B1 for communication with the general public. This level is understood by 95% of the population. Not only in The Netherlands, but also on a broader European level it is advised to governments that their language level should not exceed B1. More specifically, only high frequent used words should be used and sentences should not be longer than 15 words. When looking at the old LFS letter, both of these rules did not apply; difficult words were used and sentences were longer than 15 words. The original advance letter scored B2 instead of the desired B1.

2. More and stronger persuasion arguments

Next to simplifying the level of language used, also the types of arguments that were used needed to be redesigned. The arguments used were not very attractive for everyone. For example, arguments as 'for the quality of the statistics it is very important that you participate' and 'You represent many other people' might not draw everyone's attention.

For this second experiment, both altruistic and egoistic arguments were used. For altruistic arguments 'we need your help' and 'you help us' are used. These arguments align with the social proof principle of Cialdini. The more egoistic arguments were based on the 'what's in it for you' idea of the Cialdini principles. Egoistic arguments are harder to find for the LFS. This survey has a strong political use, but the link between what is good for society or for politics and what is good for the individual is not explicit. Nevertheless, the phrase 'This research is an indispensable source of figures about ...', was included, along with '*Because of the results, we know how things stand in the labor market, in education and in social security*'. Not only were the arguments for participating in the survey adjusted, but also the phrase about the sample. It was stated that the LFS is one of the most important CBS surveys, and that the drawn household is one of a small number chosen to participate. The latter puts some pressure on the respondent by stating how important it is that he/she participates. These two chosen arguments were in line with recommendations by Cialdini (2007), being authority, social proof and scarcity.

3. More clear and visually attractive log-in instructions

A previous CATI/CAPI follow-up study at Statistics Netherlands (Luiten, 2015) showed that people did not participate in web because of technical problems and unfamiliarity with computers or internet. A lot of people tried typing in the web address into their search engine, with the result that they did not enter the questionnaire, leading to non-response. In the 3rd experiment presented here, the procedure for logging in to the website was changed and the login procedure was described in detail in the letter of invitation, in a clear step-by-step plan with visual support. This visual support is also a direct call-to-action, being a 'foot-in-the-door', which is described in the 'commitment' principle of Cialdini.

4. Privacy statement

Both the advance letter and the reminder letters contain a clause in which is explained that the respondent's data are linked to registry information, and which registries these are. What is explained in this clause is determined in collaboration with the CBS legal department.

The clause formerly read:

Statistics Netherlands not only collects data itself but also receives many files from other institutions. For example, the data from the population administrations, the centers for work and income (UWV WERKbedrijven), the social services, the payroll administrations of many companies. We automatically combine the information you give in this study with information we receive from other institutions. With this combined information Statistics Netherlands compiles statistics on Dutch society and we work as economically as possible¹.

¹ Meant is: by not having to ask you this, we work as efficiently as possible, but this nuance is lost in translation.

From qualitative research we know that this clause is not fully understood by many people. Some people understand this statement to mean that Statistics Netherlands informs the mentioned institutes, rather than receiving information from them. For example, some of the institutions are responsible for giving out unemployment benefits. People who fear that those institutions may learn of undeclared work through their survey response will be reluctant to participate in the survey. Together with the legal department, a new version was made, where the specific examples of the collaborating institutions are removed. The text now reads:

Statistics Netherlands not only collects data itself but also receives many files from other institutions. With this combined information Statistics Netherlands compiles statistics on Dutch society and we work as efficiently as possible.

Redesigning the privacy statement touches two of the Cialdini principles of authority and liking and combining them. It made clear that Statistics Netherlands is an expert on data collection and does its job as efficient as possible, but with a more accessible tone.

Results

Three dependent variables are examined: the number of households starting the questionnaire, and the number of households where a household member starts filling in the questionnaire, breaks off, and no additional within-household response is recorded, or, alternatively, if not all household members fill in the questionnaire.. The third variable is the resulting response rate. The first measure is a more direct measure of the effect of the letter. The second measure may show if the letter rises expectations that are disappointed in the questionnaire. Households are considered to respond if all household members have responded, or are reported on by proxy.

	Started			Break off			Response		
	control	experiment	<i>P</i>	control	experiment	<i>p</i>	control	experiment	<i>p</i>
Lower linguistic complexity	29,7	32,7	***	17,3	18,1	ns	22,7	24,4	*
Persuasion arguments	28,9	28,1	ns	17,7	21,9	*	21,8	19,9	ns
Detailed log-in information	30,0	31,9	ns	18,1	20,9	ns	22,8	23,1	ns
Less explicit privacy statement	30,0	31,2	ns	18,2	15,4	ns	22,5	24,8	*

* $p < .10$, ** $p < .05$, *** $p < .01$

As is shown in the table above, the 4 experiments led to different results. Each of the experiments with their corresponding results will be discussed here. Although the results are mixed, each of the experiments led to a change in the LFS letter.

1. Lower linguistic level

Overall, the lower linguistic level led to a higher number of households starting the questionnaire. This experiment was replicated in a person sample survey and this led to the same results. A noteworthy finding within these results was that a higher number of persons subsequently broke off during the questionnaire. This almost led to significance in one of the strata, being the unemployed people. This high break-off led to a not significant higher overall increase in response rate. The age group 14 to 26 however, did reach significance with the more simplified letter. The higher number of break-offs could be the effect of the LFS questionnaire, that also contains complicated language. It could also be the effect of having to fill in the questionnaire on the web. People with low literacy also have low computer skills (e.g., Buisman and Houtkoop, 2014). Nevertheless, these results induced us to make it a policy to write all invitation letters, flyers and other communication with respondents with this lowered linguistic complexity. In addition, a program was started to diminish the linguistic complexity of survey questions.

2. Strengthening the persuasion arguments

The strengthened persuasion arguments did not have any effect on the percentage of people starting the web questionnaire. There was a higher number of households breaking off the questionnaire. Although this effect was not significant overall, this effect was seen in all subgroups. It could be that the appeal for help or the type of arguments created expectations that could not be fulfilled when filling out the questionnaire. Other interesting findings were that elderly households logged in more than 8 percentage points more often compared to the control group. They also broke off less and

agreed more often to participate in the consecutive waves. Because of the mixed results, a further look into the results was done and another experiment with only egoistic arguments was introduced. This significantly the response rate from 21,8% to 17%. The combination of altruistic combined with egoistic arguments did not lower the response rates and was therefore implemented. However, the letter now is designed with more strong altruistic arguments. The egoistic arguments now are mainly focused around the chance to win an incentive.

3. More detailed log-in instruction

The more detailed log-in instruction led to slightly higher response rates, although this effect was not significant. The experiment had mixed effects when we look at different sub groups. For middle-aged households, there was a positive effect on start rates. For the elderly households, however, there was an almost significant effect the other way around. The effects on break-off rates were comparable, so this led to slightly higher overall responses. A possible reason for this could be that the instructions were too much information for these households and thereby overwhelming them. For example, Lesser et al (2016) found similar results in an experiment where an information card was added with extra instructions for logging in. This led to a decrease in response rate of 5 percentage points. The additional materials might have caused information overload and made the task look complicated, while it isn't.

For some groups in society, a clear instruction on how to log on to the web is necessary. In addition, the login procedure has to be as simple as possible. Following the practice of Statistics Denmark, Statistics Netherlands has adopted the practice to direct respondents in all web surveys to one and the same URL ('your answer'). Passwords and login codes redirect to the correct questionnaire. The result is that the (now frequently used) internet address is also found in search engines, and can be accessed from there as well. So although this new log-in instruction did not lead to a significant difference in response, we did find hints to redesign the 'action' part of the letter. As a results of this, the log-in information is now more appealing and draws more attention (by coloring and framing) of the respondent compared to the old log-in information.

4. Privacy statement

The new privacy statement had positive effects for overall response rates. Where the starting percentages of the experiment and the control group were not significantly different, the lower drop-out rates for the experimental group finally led to significant higher overall response rates. Additional analyses showed a marginally significant interaction with Age for both starting and response ($p < .10$), indicating that the groups of 45 to 65 year old people and the group with missing background information were susceptible to the adaptation. This adaptation was subsequently implemented for the advance letter in all CBS surveys.

Summing up

All these experiments have had repercussions for the LFS letter. It is now considerably different from the LFS letter with which we started and has contained elements of many experiments: a new introduction, more appeals to altruism, headings for relevant subsections (on how to participate, the safety of data and where to go with questions), another name for the survey (not 'labour force survey', but 'work'), the offer of an incentive, and it is substantially shorter. As an extra adjustment, Statistics Netherlands implemented lottery incentives throughout all the web surveys. This also plays a huge role in the response rates, making the letter visually more attractive and with a very strong 'what's-in-in-for-me' message, the final principle of Cialdini that was not tested (reciprocity).

See below for the former LFS letter and its current version.



Centraal Bureau voor de Statistiek

Uw bericht is afgeleverd op 14-05-2018 om 10:05:11 uur. Het bericht is afgeleverd op 14-05-2018 om 10:05:11 uur. Het bericht is afgeleverd op 14-05-2018 om 10:05:11 uur.

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Als vragen of problemen heeft de aangevonden met het gebruik van het internet, het kunt u deze feedback e-mailen: advancetest@cbi.nl of onder vermelding van het CBi. Mocht u vragen hebben over een andere manier van gebruik van het internet, dan kunt u contact opnemen met de klantenservice van het CBi. Contact Center in Nederland: 020 485 2200. Het Contact Center is telefonisch voor u beschikbaar van maandag tot en met vrijdag tussen 09:00 en 17:00 uur. Daarnaast heeft u de mogelijkheid om uw vragen te stellen via de chat.

U kunt ook een goed gesprek krijgen met een van de medewerkers die telefonisch bereikbaar zijn.

Wij danken u van harte voor uw reactie op de enquête.

Vriendelijke groet,
Hans J. Vrijman
Hoofd van de afdeling Advancetest

Uw bericht is afgeleverd op 14-05-2018 om 10:05:11 uur. Het bericht is afgeleverd op 14-05-2018 om 10:05:11 uur. Het bericht is afgeleverd op 14-05-2018 om 10:05:11 uur.

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Discussion

The experience gained in the past 10 years of experimenting with advance letters not only changed the way letters are designed, but also the view on the role of types of testing (qualitative vs. quantitative) when improving advance letters. After the ‘all-the-way’ approach that we first conducted and stood at the basis of all these experiments, we found that qualitative testing might not always be a good indicator of what people will actually do when receiving a letter at home. An explanation for this could be the Elaboration Likelihood Model (Petty & Cacioppo, 1986), where highly involved people walk a central path, explicitly deliberating whether or not to participate and reading the letter very accurate. In a qualitative testing setting, this is probably the way people operate. People who come to Statistics Netherlands to evaluate advance letters are more involved, and are asked explicitly what they think about the letter. These people will walk the central path. In ‘real life’, however, most people will not study the advance letter with this kind of attention, but will most probably take a peripheral route towards decision making.

For the first group, a textually well designed letter with strong arguments is the best solution. For the people that are less involved, probably the bigger part of the population, the message must be as short as possible, to facilitate quick decision making. This peripheral route makes a stronger appeal on the lay-out of the letter, the ‘what’s-in-it-for-me’ message and the call-to-action. But caution is advised, since it should not look like an advertisement or that the shorter letter makes it look less important. If the letter is read in more detail, altruistic or argument based on the social proof and scarcity principles of Cialdini are advised, in addition to the already applied principles for the ‘peripheral’ group.

The quantitative tests indicated what works in an advance letter and what doesn’t when it comes to response rates. Qualitative research gives insight in how people think and elaborate when reading advance letters in detail. This might not always be a useful predictor when it comes to survey fieldwork. However, qualitative research on advance letters is still applied within Statistics Netherlands and is very useful when specific parts of the letter need to be redesigned. Not only led these experiments to more insights in design principles for advance letters, they also improved our understanding of the importance of the letters and their position within Statistics Netherlands. Expert groups now are formally placed within the organization and different panels are created for qualitative testing (i.e. lower literacy panel and young people panel).

Future plans opnemen in de presentatie in Ottawa:

- Meer beeldende call-to-action experimenten
- Verbeterde inlogschermb, meer smartphone beschikbaar
- Brief versus kaart in svo; geen effect
- 3e rappel experiment
- E-mail benadering bij cvo en azw; toch brieven blijven sturen

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