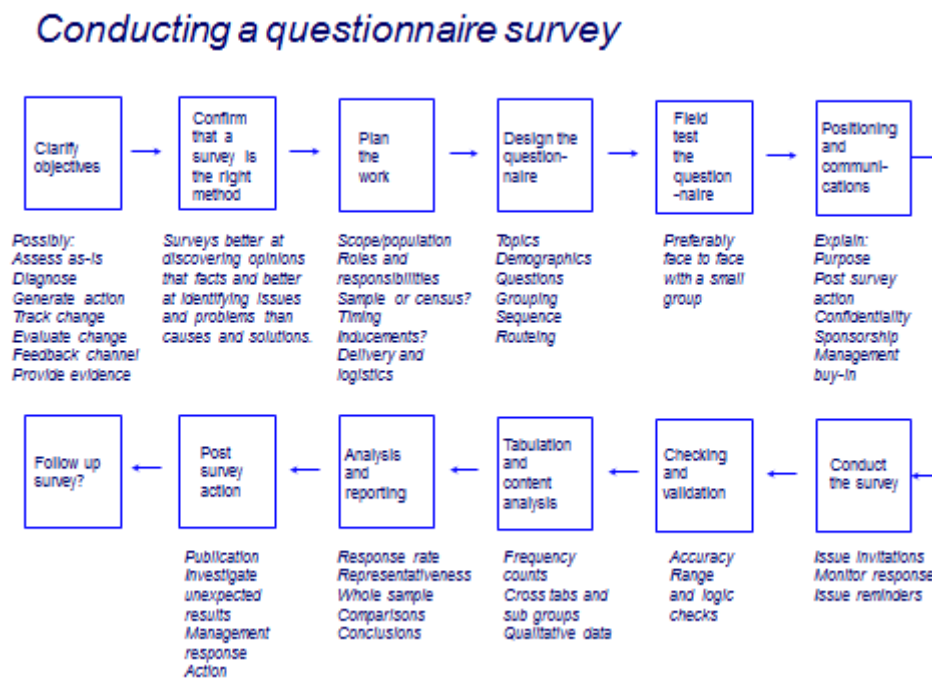


Conducting a questionnaire survey

Introduction

The chart below presents an outline of the main steps in conducting a survey. The rest of this paper expands on this basic structure.



Clarify objectives

As with most activities, the first stage is to be clear why you are carrying it out. Objectives for a survey might include:

- Assessing the current state of things
- Diagnosing a problem.
- Generating action.
- Tracking the progress of a change (especially an attitude change) which is already underway.
- Evaluating a project or change process which has finished.
- Offering a feedback channel.
- Providing evidence for a submission or policy.

Confirming that a survey is appropriate

Surveys are usually better at finding out about attitudes and opinions rather facts: if you want to know how many complaints you get or what is the age profile of the staff there are better ways to find out (in this case count them directly and use the HR records).

They are also better at finding out what is going on than why. A survey is ideal for assessing the overall level of satisfaction with the job or satisfaction with leadership, but much less good at revealing the precise causes – although it should give some pointers/

Planning

The first decision is whether to survey everybody (the “population”, the total group you are interested in) or a “sample”, or sub-group. With online surveys there is next to no difference in cost or effort, so most surveys nowadays seem to address the whole population.

It is important to define the scope of this population as precisely as possible. For instance, to conduct a survey of “managers” it would be necessary to create a working definition of that group by role, grade, location, function or whatever. Reference to the objective will often serve to focus the discussion on who the appropriate population is for a survey.

However, to be able to survey a whole population you need to know who they are and to have basic information about them (principally their email addresses). If either of these is missing, a key planning question will be how identify the population and how to gain access to them.

This in turn will influence the choice of survey method: online, paper or a combination of the two. Paper-based surveys raise additional logistical questions about design, printing and distribution, and data entry – and all of these add cost.

A common mistake is to conduct a survey and then only think about how to process and analyse the results. By then it is too late. Processing and analysis should be planned in outline as part of drafting the questionnaire. The guideline is to only include questions which you can work out how you will analyse. You cannot predict all possible analyses you may want to conduct, because some of these will be emergent from the data, but there is no point collecting data that you do not know how to analyse.

Finally, you need to think about timing (when is most likely to get accurate data and a full response) and who will be responsible for the work. It may be worth thinking at this stage too about whether to offer inducements to people to respond.

The timeline needs to cover these key stages:

- Design
- Field test and revision
- Preparation for issue (or issue of invitations if online)
- The period when the survey is open, allowing for reminders
- Data entry if paper questionnaires are involved.
- Coding of text box answers
- Producing tabulations.
- Analysis.
- Reporting.

Design the questionnaire

Areas and topics

The first task is to define the areas and topics. It is better to do this before leaping to start drafting the individual questions. There are essentially two approaches to this: top-down and bottom-up.

The top down approach involves brainstorming (or simply listing out) the main topics that flow from the objective(s). For example you are doing an evaluation of how well staff think a recent organisational change was managed, so you think you could ask them about the quality of information they were given, training, management support, pace, stress, ease of use of the new procedures etc. etc.

The bottom-up approach seeks to discover the topics for the survey by preliminary investigation - usually by unstructured interviews and group discussions (often called focus groups) with the population. Continuing the example above, in this approach you might hold some discussion groups and pose some broad open questions like: What has been your experience of change? How well was it managed? What was done well? What would you have liked to have been done differently? In the inductive approach the questions emerge rather than being pre-determined.

Demographics

It is almost always useful to collect some descriptive information about each respondent which you can use to make comparisons between sub groups of the total population: managers v non-managers, new members v long-standing ones, etc,

It is tempting to include lots of these factors on the basis that it might be interesting or useful. However, the goal should be to collect as little as possible: the more variables you have, the more complicated and time consuming will be the analysis. Focus on those variables where you think there will be differences between sub groups **and** where identifying those differences will tell you something useful which you can do something with. In doing this, keep the overall aim of the survey in mind.

The questions

The broad topics need to be translated into a set of specific questions which can be put to respondents. Here are some general guidelines:

Each question should cover only one subject.

- Use positive rather than negative as it is easier to understand.
- Use language familiar to and appropriate to the respondents.
- Make each question clear and unambiguous.
- Avoid leading questions and those containing assumptions.
- Keep the wording as brief as possible.

- Use friendly rather than staccato phrasing: in particular this implies asking questions in full – e.g. “What is your grade?” rather than “Grade?”
- Aim for consistency throughout the questionnaire in relation to the style of questions, how they are phrased and the tone they take.

Four main types of question

Choice from a list of alternatives

This type of question is supplied with a range of possible answers (“pre-coded”) and the respondent is invited to indicate which one applies. Pay grades, age ranges, educational levels, regions, gender, income are familiar examples. These questions are quick and easy to answer and also to process afterwards and for these reasons are preferred wherever possible to text-box ones (see below). The main disadvantage is that respondents may have to shoe-horn the “real” answer into the categories you have provided and this may introduce an element of distortion or simplification into the process. Here are some guidelines:

- The categories provide must be unambiguous and must not overlap.
- They work best for factual information (age, gender, location etc.).
- Try to ensure that all possibilities are covered: this may require categories of “Don’t know”, “Not applicable” and “Other”.
- If you use “other”, also provide space for a write in answer.

Most often pre-coded questions require a single answer and this is certainly easiest when it comes to analysis. In some cases, however, multiple answers would be more realistic e.g. if you are asking about reasons for doing something or changes they might like to see. Either specify how many answers are possible: e.g. “please tick up to three reasons which apply” or allow all to be ticked: “please tick all that apply”. In that latter case, what appears to be a single question is in fact a series of Yes/No questions and will have to be processed accordingly.

Rating scales

This is the type of question most commonly used for attitude surveys. Often you need to assess the degree to which respondents agree or disagree with a proposition, hold some attitude or belief, or have had a certain type of experience. Typical scales might run from Strongly agree to Strongly disagree, Always to never, Very high to very low satisfaction. They are quick and easy to complete, to process and to analyse.

- The scale needs to be evenly balanced about its mid point.
- There is some debate about this but 5 point scales are the most common.
- The points needed to be worded so as to be at equal “distance” from each other.

Some people favour scales which use numbers rather than names. The ends of the scale are defined but not the intermediate points (e.g. Fast/Slow, Very likely/very unlikely). These

scales produce results which can be easily expressed as a single number and tracked over time. But it is not certain that one person's 7/10 say means the same as another's.

Ranking

In this style of question respondents are offered a list of possible reasons, features, benefits or whatever and asked to put them in rank order. The instructions would typically read: "Rank the following in order 1 to n, where 1 is the most important, 2 the next most important and so on down to n, the least important."

This provides direct evidence of preferences, but does become rather tiresome to do if there are too many alternatives. If the rankings are averaged, differences may be averaged out and concealed. A series of separate ratings is often employed instead, but does have the disadvantage that people may rate each factor of equal importance. Conversely, although ranking does produce just that, it may actually be meaningless if respondents are actually indifferent between the various factors identified.

Text box

The simple version of this is a closed question seeking factual information, where the respondent is asked to write the answer in a space or box which is provided. E.g. "How old are you?" Such questions usually permit statistical analysis of the answers e.g. calculation of precise averages and distributions. The units of measurement must be obvious or stated and the space provided must be big enough to accommodate the answer. This is appropriate for facts where the range of possible answers is wide and precision is required. Age is a good example - if the precise age was not needed a pre-coded question inviting the respondent to tick the appropriate box would be better.

The more complicated version invites people to offer their thought about open questions like: what do you might like about working here, how could we improve our service. If respondents take the question seriously, open questions may elicit much more meaningful information than pre-coded ones, but at the price of a time-consuming task of analysis. Most attitude questionnaires will contain at least one open question.

Structure the questionnaire

Sequence

The following principles for sequencing can be identified:

- "Demographic" questions (age, sex, occupation, grade, length of service etc) go naturally at the beginning, but can equally well be presented at the end.
- If possible, put questions which respondents will be interested in answering at the beginning (to gain attention) and at the end (to encourage return of the questionnaire).
- Sometimes there is a logical order for the whole set of questions eg a chronological sequence of past, present, future.

- There may also be a logical order for individual questions - eg finding out if respondents have a car before asking what type it is.
- Generally you need to establish facts before seeking opinions about them
- “Difficult” questions (ie ones which respondents may not like to answer) are best placed towards the end.

Grouping

Questions which are of a similar type (eg the demographic ones referred to above) or are on the same subject or topic area should be grouped together. Commonly, the questionnaire is divided into sections which are given descriptive headings: “Your past experience”, “About your home”, etc. These would correspond to separate pages in an online questionnaire.

Filtering

Very often, some questions only apply to some respondents. There are two challenges here. The first is to ensure that people who should answer these questions actually do. The second is to try to prevent those to whom the questions do not apply from filling them out. This is a less serious problem since erroneous answers can be weeded out when the questionnaires are edited but it is worth paying attention to in order to avoid unnecessary work for yourself and unnecessary irritation to respondents.

Filtering can be achieved in two main ways. The first possibility is ask a filtering question e.g. Do you usually read a daily newspaper Yes/No. Then prefix the next question with *If yes, which?* This works well for a single supplementary question. If there are more, you can print instructions such as *If yes, please answers Questions 31-35, If No, please go to Questions 36.* With online surveys, this can be written in to the way the questions are presented.

If the filtering is not programmed in there will be errors which will need to be edited at the validation stage.

Field test

This is absolutely vital for any reasonably large scale questionnaire. No matter how much thought and work has gone into drafting the questions and thinking through the layout of the questionnaire, it is always necessary to test the questionnaire before using it for real. Merely having somebody read it over is not the same as having people try it out. This always reveals some scope for improvement.

The simplest way to do a field test is to gather a representative group of respondents in a room, give them the questionnaire to complete in silence, and then slowly walk through question by question asking of there were any problems or uncertainties, exploring any that come up. . Also do a visual check of the completed questionnaires to see if there were any problems with the routing instructions (e.g. questions missed out or completed incorrectly).

Positioning and communications

For staff and other internal surveys it is usually helpful to give advance warning and for the invitation to complete the survey to come from, or be endorsed by, the top management. For an external survey, especially one on paper, advance warning may be impossible of course. In any event, communications need to cover:

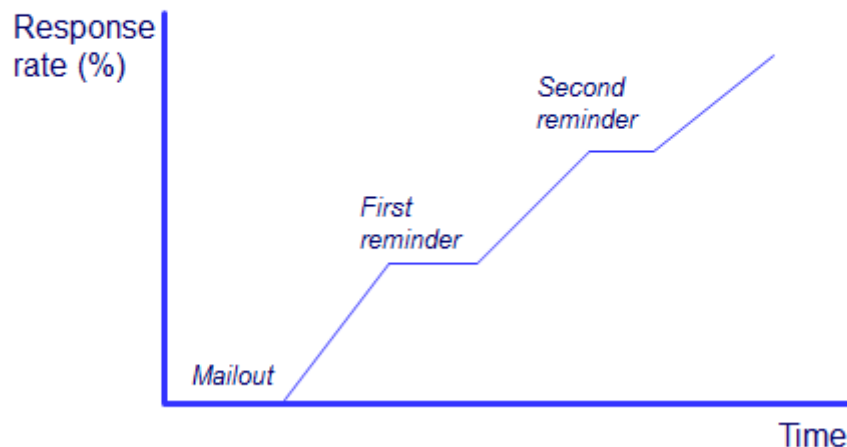
- Why the survey is taking place.
- Emphasis on its importance.
- Encouragement to take part.
- Assurances of anonymity.
- A commitment to act on the results.
- Who to contact in the event of queries

Conduct the survey

For an online survey, the start point will be emails to all potential respondents with a link to the survey website and a clear closing date. Points from earlier comms may be repeated.

A key requirement will be to monitor the response rate. The typical response curve shows spurts of response followed by plateaus.

Response rate overtime



You need to send reminders after the first two plateaus and perhaps a final one a day or two before closure. It is obviously best if reminders only go to those who have not completed the survey and ease of doing this is another benefit of those online surveys where you have the respondents' email addresses.

Data entry and validation

The results of online surveys can usually be looked on online and printed as required. If the survey is complicated, it may be better to import the data into a statistical package e.g. IBM SPSS Statistics. Paper questionnaires will need to be entered into a spreadsheet and analysed from there or imported into SPSS. Some errors may be spotted and corrected during data entry.

Then inspect the initial output for errors. There are four main kinds to look out for:

- Errors and inconsistencies in the way variables have been labelled.
- Invalid data (e.g. where a 7 has been coded, but the range of valid answers is only 1 to 6).
- Missing data (most obviously indicated by a total that is too low).
- Logic errors. These are where people have answered questions they should not have or missed questions they should have answered. These errors may be revealed by the frequency counts or in some cases may require cross tabulations of the relevant questions to reveal them.

The errors should then be corrected and the tabulations re-run to produce a clean set.

Tabulation and content analysis

The first step is to produce frequency counts and totals for all the questions in the questionnaire. Then produce cross-tabulation using the demographic questions and perhaps cross-tabulate individual questions against each other to see if there are connections (e.g. do people who dislike their line manager have lower overall job satisfaction?)

For lengthy text box questions, the process is:

- First, read through all the answers to get an overall feel for what they contain.
- Then read through again, noting down recurring themes.
- Group these themes into 6-10 categories (this may require another pass through the data in order to be confident), which will usually also include a residual "other" category.
- Go through the questionnaires again this time coding them - i.e. noting a code number in the margin or a tick in headed columns to identify the category into which the answers fall.

With online surveys the text data for each open question can usually be printed out as a single document. Add extra space to allow for coding.

Analysis and reporting

Describe the characteristics of the whole sample

The first and most basic is its size. This enables an overall **response rate** to be calculated: the proportion of the total population who have completed a questionnaire. The higher the response rate the more likely it is that the sample will be representative of the total population.

Then describe the composition of the sample using the demographic categories used on the questionnaire.

If comparable information about the total population is available, this should also be presented so that it can be compared with the sample and so that more detailed response rates e.g. by payband or location can be calculated. If the response rates are consistent and if the proportions are comparable to those in the total population then it is increasingly likely that the sample can be relied on as an accurate representation of the total population.

Describe the answers to each question for the whole sample

Present the findings first as they apply to the whole sample. Analyses by the various subgroups can follow, but first readers need to understand the overall picture.

The information should be grouped into discrete sections reflecting the structure of the questionnaire. The order may or may not reflect the order used in the questionnaire. Summary questions for example may be best reported at the beginning of a section as an attention-grabber, with specific questions providing more detail. Alternatively, they may be reported at the end of a section as a summary, which is led up to by the answers to the specific questions.

It is often desirable, especially where a number of questions are being covered in a single table, to compress the scales used in the questionnaire. It is common to combine the top two items in a scale into a single category (e.g. "those who agreed or strongly agreed") and likewise the bottom two categories. If some questions had particularly large proportions of "strongly agree" for example this can be commented on in the text.

It is normal to base percentages on those who answered the question, those who gave no answer being excluded.

Having presented each block of data, comment on the main messages. Especially:

- Extremes: the highest and lowest levels of agreement, approval, satisfaction.
- Patterns: if there was a consistent pattern to all the questions dealing with some aspect of the subject matter.
- Puzzles and contradictions: findings that are in some way contradictory or unexpected.

Make comparisons between subgroups

There are two ways to do this. One is to run a full set of tabulations for each subgroup separately and then look at them side by side to identify similarities and differences. This may be convenient if for example the subgroups are different offices and you intend to provide management in each location with tabulations of its local data. [For reasons of confidentiality it is not generally wise to provide cross tabulations to local management because they may enable the identification of individuals.]

The other - and probably easier alternative – is to produce a series of cross tabulations in which some or all questions are cross-tabulated against the dimensions you are interested in. Usually, these will be the descriptive categories used to describe the sample: payband, gender, etc.

Sometimes however new variables may be constructed during the analysis. For example, if data was collected about how often people used a system this might be used to create a new variable in which users were categorised as frequent, moderate or low and this could be used to produce cross tabulations to compare the attitudes and characteristics of these groups.

Additionally, it is often instructive to see how the answers to individual questions are related to each other: were people who said they were well informed more likely to be positive about change, for example.

It is common to only report those cross tabulations that are most revealing and distinctive. Sometimes these are identified by cross tabulating everything and picking out the most meaningful bits, other times by deciding in the light of the frequency counts which questions are likely to be the most significant and only looking at those.

In drawing conclusions from cross tabulations, focus on the percentages rather than the absolute numbers, although of course this can be misleading if the numbers are very small. Bear in mind the basic principle of statistical validity: with a large number of items of data to compare, quite small difficulties can be significant, but with small numbers of items, the differences need to be large to be significant.

Overall conclusions

Finally, draw overall conclusions about what the survey seems to be saying. A few main messages are probably more useful here than lots of detail.

It may or may not be appropriate to go beyond this into making recommendations. Often deciding what to do in the light of survey findings is a separate process and making recommendations may distract attention from the findings of the survey itself.

Annexes

It is often helpful to include the full tabulations in Annexes to the report, so that those who want to go into the data in more detail are able to do so. This is especially important if the

report contains summarised data. Cross tabulations should be examined to ensure that they do not inadvertently identify individuals.

Post survey action

The only general point to make here is that there should be some!

Follow-up survey

A survey can only paint a picture at a point in time. The story becomes much more meaningful when trends and patterns emerge over time.

Peter Hyde

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