

# Basic Principles in Questionnaire Design

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## Introduction

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**Questionnaire:** a set of common questions laid out in a standard and logical form to record data from respondent. Instructions show the interviewer or the respondent how to move through the questions and complete the schedule. It could be printed on paper or on a computer screen.

# Introduction

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The primary purpose of a questionnaire is to help extract data from respondents.

It serves as a standard guide for the interviewers who each need to ask the questions in exactly the same way.

Questionnaires are also an important part in the data collection methodology. They are the medium on to which responses are recorded to facilitate data analysis.

Questionnaire design is one of the hardest and yet one of the most important parts of the market research process. Given the same objectives, two researchers would probably never design the same questionnaire.



# People to take into consideration

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There are five people to take into consideration when designing a questionnaire:

**Client** – the client wants answers to their particular problem and even, on occasion, to have their worst fears shown up to be unlikely or improbable.

**Researcher** – the researcher needs to uncover information and balance the needs of three groups of people. She or he needs to ensure that the interviewer can manage the questionnaire easily, that the questions are interesting for the respondent and that the questionnaire matches the data user needs.



# People to take into consideration

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**Interviewer** – the interviewer wants a questionnaire which is easy to follow and which can be completed in the time specified by the researcher.

**Respondent** – respondents generally want to enjoy the interview experience. They need to feel that the questions are phrased so that they can be answered truthfully, and so that they allow the respondent to actually say what he or she thinks. They may also want to know if they will receive anything in return for giving their opinion.

**Data-processor** – the data processor wants a questionnaire which will result in data which can be processed efficiently and with minimum error.



# Preliminary decisions in questionnaire design

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There are nine steps involved in the development of a questionnaire:

1. Decide the information required.
  2. Define the target respondents.
  3. Choose the method(s) of reaching your target respondents.
  4. Decide on question content.
  5. Develop the question wording.
  6. Put questions into a meaningful order and format.
  7. Check the length of the questionnaire.
  8. Pre-test the questionnaire.
  9. Develop the final survey form.
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## Deciding on the information required

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It should be noted that one does not start by writing questions. The first step is to decide 'what are the things one needs to know from the respondent in order to meet the survey's objectives?'

One may already have an idea about the kind of information to be collected, but additional help can be obtained from secondary data. In respect of secondary data, the researcher should be aware of what work has been done on the same or similar topics in the past, what factors have not yet been examined, and how the present survey questionnaire can build on what has already been discovered. Further, a small number of preliminary informal interviews with target respondents will give a glimpse of reality that may help clarify ideas about what information is required.



## Define the target respondents

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The researcher must define the population about which he/she wishes to generalise from the sample data to be collected. Secondly, researchers have to draw up a sampling frame. Thirdly, in designing the questionnaire we must take into account factors such as the age, education, etc. of the target respondents.



# Choose the method(s) of reaching target respondents

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The method(s) of reaching target respondents may affect the way questionnaire designed.

- Interviewed by enumerator
- Self enumeration

The way that the interview will be carried out will have a bearing on the framing of the questions. For example, interviews carried out over the telephone have some limitations compared with face to face interviews. Self-completion questionnaires need to be very precise and explicit in the way they are designed.



# Decide on question content

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We may need a list of all the questions that could go into the questionnaire.

The aim at this stage is to be as comprehensive as possible in the listing and not to worry about the phrasing of the questions. That comes next.

No question should be included unless it will provide data and information needed.

Researchers must always be prepared to ask, "Is this question really needed?"



# Develop the question wording

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Survey questions can be classified into three forms, i.e.

- Closed questions,
- open-ended questions
- open response-option questions.

All these three forms has its advantages and disadvantages.



# Develop the question wording

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Closed questions advantages:

- It provides the respondent with an easy method of indicating his answer - he does not have to think about how to articulate his answer.
- It 'prompts' the respondent so that the respondent has to rely less on memory in answering a question.
- Responses can be easily classified, making analysis very straightforward.

Examples?



# Develop the question wording

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Closed questions disadvantages:

- They do not allow the respondent the opportunity to give a different response to those suggested.
  - They 'suggest' answers that respondents may not have considered before.
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# Develop the question wording

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## Open-ended questions

With open-ended questions the respondent is asked to give a reply to a question in his/her own words. No answers are suggested.

Example: "What type of fertilizer that you use"

Is this a good examples?



# Develop the question wording

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Open-ended questions have a number of advantages when utilised in a questionnaire:

They allow the respondent to answer in his own words, with no influence by any specific alternatives suggested by the interviewer.

They often reveal the issues which are most important to the respondent, and this may reveal findings which were not originally anticipated when the survey was initiated.

Respondents can emphasise the strength of their opinions.



# Develop the question wording

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**Open-ended questions** disadvantages:

Respondents may find it difficult to 'articulate' their responses i.e. to properly and fully explain their attitudes or motivations.

Respondents may not give a full answer simply because they may forget to mention important points. Some respondents need prompting or reminding of the types of answer they could give.



# Develop the question wording

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## Open-ended questions disadvantages:

Data collected is in the form of verbatim comments - it has to be coded and reduced to manageable categories. This can be time consuming for analysis and there are numerous opportunities for error in recording and interpreting the answers given on the part of interviewers.

Respondents will tend to answer open questions in different 'dimensions'. For example, the question: "When did you purchase your tractor?", could elicit one of several responses:

"A short while ago". "Last year". "When I sold my last tractor".  
"When I bought the farm".

Such responses need to be probed further unless the researcher is to be confronted with responses that cannot be aggregated or compared.



# Develop the question wording

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It has been suggested that the **open response-option** questions largely eliminate the disadvantages of both the afore-mentioned types of question. An open response-option is a form of question which is both open-ended and includes specific response-options as well. For example,

What features of this programme do you like?

- Performance
  - Quality
  - Price
  - Weight
  - Others mentioned:
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## Develop the question wording

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The advantages of **open response-option** question are twofold:

The researcher can avoid the potential problems of poor memory or poor articulation by then subsequently being able to prompt the respondent into considering particular response options.

Recording during interview is relatively straightforward.

The one **disadvantage** of this form of question is that it requires the researcher to have a good prior knowledge of the subject in order to generate realistic/likely response options before printing the questionnaire. However, if this understanding is achieved the data collection and analysis process can be significantly eased.

## Develop the question wording

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There are situations in which a questionnaire will need to incorporate all three forms of question, because some forms are more appropriate for seeking particular forms of response.

In instances where it is felt the respondent needs assistance to articulate answers or provide answers on a preferred dimension determined by the researcher, then closed questions should be used.

Open-ended questions should be used where there are likely to be a very large number of possible different responses (e.g. farm size), where one is seeking a response described in the respondent's own words, and when one is unsure about the possible answer options.

# Putting questions into a meaningful order and format

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The ordering of the questions is important as it brings logic and flow to the interview. Normally the respondent is eased into the task with relatively straightforward questions while the more difficult or sensitive ones are left until they are warmed up.

## **Opening questions:**

Opening questions should be easy to answer and not in any way threatening to the respondents.

The first question is crucial because it is the respondent's first exposure to the interview and sets the tone for the nature of the task to be performed.

If they find the first question difficult to understand, or beyond their knowledge and experience, or embarrassing in some way, they are likely to break off immediately. If, on the other hand, they find the opening question easy and pleasant to answer, they are encouraged to continue.



# Putting questions into a meaningful order and format

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## **Question flow:**

Questions should flow in some kind of psychological order, so that one leads easily and naturally to the next.

Questions on one subject, or one particular aspect of a subject, should be grouped together. Respondents may feel it disconcerting to keep shifting from one topic to another, or to be asked to return to some subject they thought they gave their opinions about earlier.



## Closing questions

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It is natural for a respondent to become increasingly indifferent to the questionnaire as it nears the end. Because of impatience or fatigue, he may give careless answers to the later questions.

Those questions, therefore, that are of special importance should, if possible, be included in the earlier part of the questionnaire. Potentially sensitive questions should be left to the end, to avoid respondents cutting off the interview before important information is collected.



## Physical appearance of the questionnaire

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The physical appearance of a questionnaire can have a significant effect upon both the quantity and quality of data obtained.

The quantity of data is a function of the response rate. Ill-designed questionnaires can give an impression of complexity and too big a time commitment.

Data quality can also be affected by the physical appearance of the questionnaire with unnecessarily confusing layouts making it more difficult for interviewers, or respondents in the case of self-completion questionnaires, to complete this task accurately.



## Physical appearance of the questionnaire

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In general it is best for a questionnaire to be as short as possible. A long questionnaire leads to a long interview and this is open to the dangers of boredom on the part of the respondent (and poorly considered, hurried answers), interruptions by third parties and greater costs in terms of interviewing time and resources.

the questionnaire should be clear and easy to read. It should be easy for the interviewer to navigate around.

There needs to be enough space to write in answers and the responses codes need to be well separated from each other so there is no danger of circling the wrong one.



## Piloting the questionnaires

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Even after the researcher has proceeded along the lines suggested, it is impossible to say whether it is going to achieve the desired results until it has actually been used in interviews and with respondents.

For this reason it is necessary to pre-test the questionnaire before it is used in a full-scale survey, to identify any mistakes that need correcting.



# Piloting the questionnaires

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The purpose of pretesting the questionnaire is to determine:

- whether the questions as they are worded will achieve the desired results
  - whether the questions have been placed in the best order
  - whether the questions are understood by all classes of respondent
  - whether additional or specifying questions are needed or whether some questions should be eliminated
  - whether the instructions to interviewers are adequate.
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# Piloting the questionnaires

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Usually a small number of respondents are selected for the pre-test.

It usually isn't necessary to carry out more than 10 to 20 interviews in a pilot because the aim is to make sure that it works, and not to obtain pilot results. In theory the questionnaire should be piloted using the interviewing method that will be used in the field (over the phone if telephone interviews are to be used; self completed if it will be a self completion questionnaire).

The respondents selected for the pilot survey should be broadly representative of the type of respondent to be interviewed in the main survey.



## Develop the final survey form

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If the questionnaire has been subjected to a thorough pilot test, the final form of the questions and questionnaire will have evolved into its final form.

All that remains to be done is the mechanical process of laying out and setting up the questionnaire in its final form.

This will involve grouping and sequencing questions into an appropriate order, numbering questions, and inserting interviewer instructions.

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THANK YOU

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