

## Chapter 5

# Questionnaire Design

A questionnaire is a set of questions to be asked from respondents in an interview, with appropriate instructions indicating which questions are to be asked, and in what order. Questionnaires are used in various fields of research like survey research and experimental design. A questionnaire serves four functions—enables data collection from respondents, lends a structure to interviews, provides a standard means for writing down answers and help in processing collected data.

A questionnaire will be ineffective if it is not designed in a manner easily understood by both the interviewer and the interviewee. If there is a single, fundamental principle for developing a sound questionnaire design (Labaw 1980) it is that the respondent defines what you can do: the types of questions you can reasonably ask; the types of words you can reasonably use; the concepts you can explore; the methodology you can employ. The design is dependent on the researcher's decision to collect qualitative data for better understanding and generation of hypotheses on a subject (exploratory research), or quantitative data to test specific hypotheses.

This chapter discusses the various steps in questionnaire design like:

- Preliminary decisions
- Question content
- Response format
- Question wording
- Questionnaire sequence
- Questionnaire pre-test, revision and final draft

Let us elaborate each of these aspects.

### 5.1 Preliminary Decisions

A researcher has to take many decisions before framing the actual questionnaire. These decisions relate to the information required, the target respondents and the choice of interviewing techniques.

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### 5.1.1 Required Information

The researcher is expected to know and understand the survey's objectives before he or she can take further steps. In framing a questionnaire, the researcher must ensure that the questions are designed to draw information that will fulfil research objectives. Sometimes researchers end up designing questionnaires that study the peripheral issues related to a problem or an opportunity but fail to give insight into the actual problem. Such questionnaires will act as a drain on a company's resources and the data so collected may mislead the top management while making decisions.

To avoid such situations, a researcher should go through the secondary data and research studies that are similar to the current research. This helps in planning current research based on existing research findings related to the topic under study. The researcher can also conduct informal interviews with the prospective target audience to understand the nature of the problem and the information that would help managers in solving a problem.

### 5.1.2 Target Respondents

Before conducting the actual survey, the researcher must make sure of the target population for the survey. For example, in case of market research, a researcher has to decide whether to include both users and non-users of a product or service. This is a crucial step, as the sampling frame would be drawn after the target respondents are defined.

Defining the target respondents becomes vital as the task of developing a questionnaire that will be suitable to all cross-sectional groups of a diversified population.

### 5.1.3 Interviewing Technique

In developing a questionnaire, a lot depends on the choice of interviewing technique. The format and type of questions will be different for personal interviews, focus groups, telephonic interviews and mailed questionnaires. A questionnaire designed for direct interviewing cannot be used for a survey through mail. In personal interviews, the respondent should be clearly told the details and the form of answers the questions require. It is prudent for questionnaires to be brief and to the point in telephonic interviews. Mail survey questionnaires should give clear instructions about the type of details that are desired, as an interviewer does not mediate these interviews.



## 5.2 Question Content

A clear definition of the problem and the objectives framed thereafter, play a major role in deciding the content of the questions. In other words, the general nature of the questions and the information they are supposed to elicit decide the question content. In this process, things become easier because there are some set standards that can be followed.

Irrespective of the type of research, a researcher has to find answers to five major questions while deciding the question content. They are

- I. What is the utility of the data collected?
- II. How effective is a question in producing the required data?
- III. Can the respondent answer the question accurately?
- IV. Is the respondent willing to answer the question accurately?
- V. What is the chance of the responses being influenced by external events?

### 5.2.1 The Utility of Data

A researcher should ensure that each question in the questionnaire contributes to the survey. For this, every question needs to be screened before it is added to the questionnaire. This screening test analyses the usefulness of the data that will be gathered by that particular question. Questions like, 'Does it significantly contribute towards answering the research question?' 'Will its omission affect the analysis of any other data?' and 'Can the same information be gathered through any other question?' have to be asked. If the question does not answer any of these questions positively, or generates just 'interesting or good to know information', then it should be dropped. However, in special cases, it becomes necessary to ask unnecessary and disguised questions to avoid any response bias.

### 5.2.2 Effectiveness in Producing Data

After it is decided to include the question in the questionnaire, it should be assessed whether the question will be able to generate the required information or if it needs to be broken down into two specific questions (double-barrelled questions) to elicit better and accurate answers from respondents. In simple words, the question should be effective enough to extract the required information from the interviewee.

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### 5.2.3 The Participant's Ability to Answer Accurately

It is necessary that respondents understand the question in a way that the researcher wants. This will eliminate the probability of potentially incorrect responses. This can be tackled by using simple words to frame the questions. A respondent's inability to answer a question may arise from three sources—genuine ignorance about the topic, inability to recollect the answer and inability to verbalize the response.

**Ignorance:** This refers to respondents being unaware or uninformed about the subject of the question. This can lead to respondent bias as respondents will rarely admit to lack of knowledge on a topic. These respondents will participate at the expense of accuracy. To cover up their ignorance, they provide some answers or the other, assuming that the interviewer will be impressed with their knowledge level.

**Inability to recollect:** This happens when respondents forget an answer because of recall and memory decay. This happens when questions overtax the respondents recall ability. For example, questions like 'What was your expenditure on grocery items in the last week?' requires respondents to bank on their memory to answer it. It is a fact that many of us cannot exactly keep track of factual details relating to recent activities. But while responding to questions on the same, we tend to give the best answer that we can recollect. Some aspects of forgetfulness in a respondent that are of concern to researchers are:

**Omission**—when the interviewee is unable to remember if an incident actually occurred. For instance, while answering the above question, the respondent might not recollect the purchases made in the last week and hence might fail to give the actual data.

**Telescoping**—when the interviewee thinks that an event that occurred sometime in past occurred more recently. In other words, the respondent may report purchases made a fortnight ago as done in the last week.

**Creation**—when the interviewee feels that the incident or event did not occur at all. In other words, total forgetfulness.

The above three aspects of forgetting increase with the length of the recall period. The telescoping and creation aspects can be minimized by using short recall periods. This means that the interviewee should be asked questions, which need only recall of incidents and events from the near past. Omission can be dealt with only by aided or unaided recall measures.

**Inability to verbalize:** This refers to the respondents' inability to verbalize factors influencing their buying motives. It is not quite possible to answer questions like, 'Why did you buy that car?', 'What made you buy that brand of shoes?' This is because many times people buy things for reasons other than what they admit to themselves. There might be definite reasons behind the purchase like habit, vanity, taste, etc. but when asked 'Why?' people are generally unable to articulate reasons, as they are not conscious of what is in their sub-conscious. Researchers can awaken the sub-conscious minds of the respondents through effective projective techniques.





### 5.2.4 The Respondent's Willingness to Answer Accurately

This refers to the researcher assessing the likelihood of the respondent answering a particular question accurately. A respondent's unwillingness to answer a specific question can result in item non-response (where the respondent completes the rest of the questions other than those he or she is uncomfortable with), refusal to complete the rest of the questionnaire or in deliberate falsification. Questions such as, 'Were you involved in any extra-marital relationship in the 10 years of your marriage?' 'Would you resort to stealing things in a supermarket if you knew there were no hidden cameras?' are virtually sure to attract stereotyped responses or refusals from participants.

This refusal can be because of the question being offending, too personal and embarrassing, reflecting on prestige, or when the respondents decide the topic is irrelevant to their interests. Hence, researchers should carefully look into the inclusion of such questions. If the information from such questions is essential, the questions can be framed subtly so that the respondent's attention is not attracted. Very often, questions of a personal nature will be answered by respondents in an anonymous survey that is if they do not have to give their real names or identities.

### 5.2.5 Effect of External Events

Sometimes the respondent's answer to a particular question is exaggerated or understated due to the interference of external events. Example of external events is weather or time. For example, a questionnaire designed to find the potential footfalls for a big apparel showroom that is to come up in a business district investigated the shopping patterns of women by asking them 'how many times did you go shopping in the past 1 week?' The survey was conducted just after a week of heavy rain in the particular city. The shopping frequency reported by respondents was dismaying as most of them had naturally preferred to stay indoors without going shopping in the rains. Though the answers were right for the particular question, it was not truly representative of the shopping frequency of the respondents. Hence, questions should be framed after considering external events. A better way to frame the question would have been to keep it 'situation free' and frame it in a general manner to avoid linkage with external events. The question in the above example could have been, 'how many times do you shop in a week?'

## 5.3 Response Format

The response format required by a question depends on the nature of the research. The format usually deals with issues relating to the degree of freedom that should be given to respondents while answering a question. Two popular response formats are



- Open-ended questions
- Close-ended questions.

### 5.3.1 Open-Ended Questions

A type of question that requires participants to respond in his/her own words without being restricted to pre-defined response choices is known as an open-ended question. They are also called infinite response or unsaturated type questions. Open-ended questions are structured in themselves. Although they probe for unstructured responses, there is a definite structure in the arrangement of questions in the questionnaire. They help establish rapport, gather information and increase understanding. Open-ended questions act as memory prompts, as they at times require the respondent to recollect past experiences. Therefore, the interviewer should refrain from making suggestions. He should rather invite the participant to use his/her own choice of words to answer. The interviewer should get the respondent to talk as much as possible and record answers in the same words used by the interviewee.

Open-ended questions are useful when the respondent is able to provide a narrative answer, when the researcher is uncertain what answers are needed or wants to conduct exploratory research. Such questions can be sub-divided into three sub-types—free response, probing and projective.

### 5.3.2 Free Response

Free-response questions typically fluctuate in the degree of freedom they give to the interviewee. Look at the following questions.

Q What do you think of the performance of the Indian hockey team in the recent Athens Olympics?

Q How would you evaluate Dhanraj Pillay's performance in the Athens Olympics?

The second question seeks a more directive response about a particular member of the Indian hockey team rather than asking about the whole team.

### 5.3.3 Probing

Probing open-ended questions are those where the actual open-ended questions are reached a little later in the process. Consider the following example.



Q Which brand of soft drink do you like? Coke or Pepsi?

A Pepsi.

Q Why do you prefer Pepsi to Coke?

A I like the taste.

Q What aspect of its taste do you like? (Probe)

This is where the interviewer starts probing to get to the specific product attributes linked to the interviewee's liking of Pepsi and the role that the sub-conscious mind of the interviewee plays in influencing the buying decisions.

### 5.3.4 Projective

A vague question or stimulus used by the researcher to project a person's attitudes from the responses is known as a projective open-ended question. Such questions are primarily used in projective techniques and have been extensively covered in the chapter 'Qualitative and Observation Studies'.

For the advantages and disadvantages of open-ended questions, refer Exhibit 5.1

### 5.3.5 Close-Ended Questions

Questions, which restrict the interviewee's answers to pre-defined response options, are called close-ended questions. Close-ended questions give respondents a finite set of specified responses to choose from. Such questions are deemed appropriate when the respondent has a specific answer to give (for example, gender), when the researcher has a pre-defined set of answers in mind, when detailed narrative information is not needed or when there is a finite number of ways to answer a question. These questions are common in survey researches. Four major structures exist for close-ended questions. They are:

- Binary
- Ranking questions
- Multiple choice
- Checklist

## 6. Binary Questions

These are also known as dichotomous questions as they permit only two possible answers. The respondent has to choose one of the two permissible answers. Binary

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questions are helpful in collecting simple, factual data, and they should be used to record classification data about the interviewee (demographic data). These questions have the response options “Yes” or “No” or “True” or “False” or “Agree” or “Disagree”. Such questions should generally not be included in a questionnaire because these choices may not cover the whole range of possible responses. The respondent might be compelled to give answers whether or not they represent their true feelings. This tends to affect the survey’s accuracy.

Exhibit 5.1 Advantages and disadvantages of open-ended and close-ended questions	
Advantages	Disadvantages
OPEN- ENDED	<ul style="list-style-type: none"><li>• Coding open-ended questions is difficult and time consuming</li><li>• As the questions require more thought and time on the part of the interviewee, it reduces the number of questions that can be asked within a specified time span</li><li>• There are chances that a researcher/ interviewer might misinterpret a response as it becomes difficult pooling an opinion across the sample</li></ul>
<ul style="list-style-type: none"><li>• Open-ended questions can discover uncommon but intelligent opinions of which the surveyor would otherwise have remained unaware</li><li>• The respondent has greater freedom of expression</li><li>• There is no bias due to limited response ranges</li><li>• Respondents have freedom to qualify their answers</li></ul>	
CLOSE- ENDED	<ul style="list-style-type: none"><li>• The options might not reveal the true feelings of the participants</li><li>• Misleading conclusions can be drawn because of poor questionnaire design and limited range of options</li><li>• Requires pre-testing and prior open-ended research to ensure that choices offered are the relevant ones</li></ul>
<ul style="list-style-type: none"><li>• Close-ended questions are more specific and easy to answer</li><li>• They provide a high level of control to the interviewer by obliging the interviewee to answer questions using a particular set of options</li><li>• The uniformity of the questions makes them easier to code, record and analyse results quantitatively</li><li>• No difference between articulate and inarticulate respondents</li><li>• Higher response rate</li><li>• Less expensive and time consuming</li></ul>	

5.3.7 Ranking Questions

These questions require the participant to continuum basis in order of preference.

rank the response options listed on a Ranking questions are used to get

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information that reveals participants’ attitudes and opinions. These questions list several alternatives that might influence an individual’s decision-making. The participant assigns a rank to each option listed as per the scale mentioned. Consider the following example:

The factors that influence your decision to buy from a particular supermarket are listed below. Please rank them from the most important (1) to the least important (7).

Conveniently located	_____
	-
Helpful sales staff	_____
	-
Owner is a known person	_____
	-
Recommended by a friend or relative	_____
	-
Regular discounts offered	_____
	-
Instant home delivery	_____
	-
Availability of everything I need	_____
	-

Such questions make it easy to compare different alternatives at the same time.

5.3.8 Multiple-Choice Questions

These questions cover all significant degrees of response. The respondent has to select an option that best describes their feelings. These are mostly a variation of binary questions with more responses provided. These are also known as ‘cafeteria’ questions. Three issues that should be considered while framing such questions are—the response options should be collectively exhaustive to qualify it as a valid question; the position of the responses should be varied to avoid the selection of any particular response due to position bias and the response options offered should be distinct from one another. The reasons behind the popularity of multiple-choice questions are their simplicity and applicability.

5.3.9 Checklist Questions

These are questions where the participant has the freedom to choose one or more

of the response options available. This is different from multiple-choice questions in that it gives freedom to the respondents to choose one or more of the options available. Consider the following question.

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Q Which premium brand of shirts do you possess? (Tick as many of the following as apply)

- Allen Solly
- Louis Phillippe
- Van Heusen
- Color Plus
- Zodiac

It should be ensured that options are placed in a random sequence rather than in any preferential order. Apart from the options selected by the researcher, an option called ‘others’ should be provided so that the respondent can fill it in if he wants to. With all significant categories present, this method facilitates replies from the respondent and subsequent tabulations. For the advantages and disadvantages of close-ended questions, refer Exhibit 5.1

Exhibit 5.2 Examples of common problems with question wording	
Avoid objectionable and sensitive questions	Objectionable: How often do you travel in a bus without a ticket?  Unobjectionable: How often do you forget to take a ticket while travelling by bus?  (Disguised)
Avoid biased questions	Biased: Do you think that TV has a negative effect on children?  Unbiased: What are your views about the effects of TV on children?
Avoid vague questions	Vague: How satisfied are you with Celebrity Resorts?  Better: How would you describe the hospitality in Celebrity Resorts in your own words?
Avoid unwarranted Presumptions	Presumptive: How satisfied are you with the speed of response for on-site technical support? (assumes that customers are satisfied)

	<p>Better: How satisfied or dissatisfied are you with the speed of response for on-site technical support?</p>
<p>Avoid the use of leading questions that prompt the respondent to a particular answer</p>	<p>Leading: Would you prefer a supermarket nearer your home?</p> <p>Better: How often would you shop from a supermarket based on its distance from your house?</p>
<p>Avoid asking negative Questions</p>	<p>Negative: Sales persons should not be allowed to make visits in the evening. Agree/Disagree</p> <p>Positive: Sales persons should be allowed to make visits at any time. Agree/Disagree</p>

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Ensure that the wording is completely unambiguous	Ambiguous: How seldom, occasionally and frequently do you purchase stock?  Unambiguous: How often do you purchase stock?a) Seldom b) Occasionally c) Frequently
Avoid double-barrelled questions	Double-barrelled: Do you drive or take the bus everyday to office? Yes/No  Better: How do you go to your office everyday? Drive or take a bus?
Have as narrow a reference range as possible	Too broad a time period: How many times have sales promotions influenced you to switch brands over the last 1 year?  Better: How many times in the last month have sales promotions influenced you to switch brands?

5.4 Question Wording

Designing questionnaires can be an exercise in effective cross-communication, as it tests the communication abilities of the person framing them. The effective translation of the desired question content into appropriate words does the trick in gathering responses. Questions tend to get longer to be explicit, present alternatives and explain meanings. In such cases, lack of appropriate words can result in the respondent misunderstanding the question and giving inappropriate answers or even refusing to answer. A slight mistake in questionnaire wording can be annoying and cause potential problems in data analysis, resulting in incorrect results. Although the importance of wording has been recognized, the search for a set of basic rules for questionnaire wording still remains elusive. However, guidelines developed from previous research experiences tell us that the following factors should be looked into while framing a questionnaire.

- I. Shared vocabulary
- II. Unsupported assumptions
- III. Frame of reference
- IV. Biased wording
- V. Adequate alternatives

- VI. Double-barrelled questions
- VII. Generalizations and Estimates

Refer Exhibit 5.2 for common problems with question wording.

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### 5.4.1 Shared Vocabulary

An interview of any kind is mostly an exchange of ideas between the interviewer and the interviewee. This exchange takes place mostly through words. This makes it imperative for the interactive language to be kept simple and easily understood by both parties. A couple of things are worth ensuring in this respect. First, the involvement and usage of technical language has to be dealt with carefully. This is necessary as using highly technical language in the questions may create understanding problems for both the interviewer and the interviewee. The second issue is the appropriate choice of words. It is not enough to ensure that the words are simple. It also has to be seen that the words are not ambiguous or vague.

### 5.4.2 Unsupported Assumptions

Questionnaires should avoid the use of implicit assumptions for better response rates. A questionnaire should not contain questions framed on assumptions that are not explained in the questions. A question should not leave anything for the respondents and the audience to interpret. The question should be supported with valid assumptions that would make it clearer to the audience. Unsupported, implied assumptions tend to produce exaggerated estimates from respondents. Consider the following question to a lady. ‘How often does your man accompany you to...?’ This will elicit varied responses and may even be misinterpreted. The question assumes that every lady has a spouse or a boyfriend, which is obviously not the case. Consider another question. ‘Would you favour a ban on overcrowding of buses?’ This is sure to provide an inflated estimate of the public’s demand, unless the assumption ‘even if it means an increase in bus fares?’ is added. When the assumption is explicit in the question itself, it tends to produce the right estimates of the demand for products.

### 5.4.3 Frame of Reference

A single word can have several connotations under different situations. Words such as ‘often’ and ‘regularly’ can mean different time frames for different individuals. The word ‘capacity’, for example, can mean very different things to an industrialist and an educator. But the framework of social desirability makes the interviewer extend a common frame of reference to the participants. The interviewer assumes that the interviewee has understood the question in its denotative terms and qualifies the answer as valid. This is a mistake as the respondent might have answered the question using an individual frame of reference rather than from the interviewer’s point of view.





### 5.4.4 Biased Wording

Questionnaires should avoid the use of biased wording. This tends to influence the responses of the participants in predetermined ways. Biased and loaded words tend to be emotionally coloured, eliciting automatic feelings of approval or disapproval. They make participants aware of the desired response, thereby taking the focus away from the actual response.

For example, a question to a factory employee, ‘Would you favour the replacement of manual labour by machinery?’ is sure to receive a negative response. A way of asking the question to read the sub-conscious mind of the employee would be, ‘How do you think the introduction of machines would affect labourers in a factory?’

Similarly, a question in a customer feedback form, ‘How satisfied are you with the service provided at our restaurant?’ is biased as the question implies that the customer is already satisfied and asks them to grade the service.

The question should rather be phrased, ‘How satisfied or dissatisfied are you with the service provided at our restaurant?’, thereby avoiding bias.

### 5.4.5 Adequate Alternatives

Questionnaires should give an ample number of alternative answers to each question. This too helps avoiding bias in responses. Alternatives should be explicit rather than implicit. This gives respondents the freedom to choose among alternatives rather than delve into their own mind to recollect responses. It is a faster way to gather responses. For example, consider the following question:

How often do you purchase stock?

- (a) Seldom
- (b) Occasionally
- (c) Frequently

### 5.4.6 Double-Barrelled Questions

Questionnaires should avoid asking double-barrelled questions like, ‘Do you like fuel-efficient cars with comfortable seats?’ This is actually a combination of two questions. It does not distinguish between people who prefer cars due to their fuel-efficiency and people who prefer a car for its comfortable seats or other competing reasons. Such questions can be easily divided into two different questions. Answers to double-barrelled questions will be ambiguous because two or more ideas are included.

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## 5.4.7 Generalizations and Estimates

Questionnaires should be structured to avoid generalizations and estimates. It is seen that when respondents are asked for the frequency of a particular activity over a longer period, they tend to provide generalizations and estimates rather than the actual figures. This trend can be reduced by changing the time reference point to a more specific base. Answers that require calculations by the respondent should also be avoided. Minimal necessary information can be gathered and then the calculations should be done by the interviewer.

## 5.5 Questionnaire Sequence

The structure of a questionnaire is an important aspect in questionnaire design. The questionnaire structure is framed depending upon whether it is self-administered or the administration is facilitated by an interviewer. Questionnaire structure pertains to the proper sequencing for better and effective responses. The sequencing tends to drive the interview through a 'funnel-shaped' process, starting with general questions and progressing to more specific ones. The interviewer, before moving to sequential steps, gives a brief introduction about the survey's basic purpose survey and client confidentiality. This sequencing is explained through the following steps:

- Lead-in questions
- Qualifying questions
- Warm-up questions
- Specifics questions
- Demographics questions

### 5.5.1 Lead-in Questions

This is the introductory phase of the interview and consists of tactfully designed ice-breakers. These can prove crucial in gaining the participant's confidence and cooperation. The questions should be simple, non-threatening and not too personal at this stage. A good way to start the session is by asking a 'ringer or throw away' question or a dichotomous question with two responses. These questions measure the respondent's interest and willingness to respond. The questions can be about hot topics of the day, where responses are of little importance to the survey. A typical lead-in question is given below.

Q It is often said that the economic condition in India is a by-product of the political situation. Do you agree with this?

A YES/NO



### 5.5.2 Qualifying Questions

These are questions that slowly lead to the survey's objective. This stage is characterized by questions that evaluate the respondent and qualify him/her for further questioning. Depending on the responses, the interviewer directs the interview towards a relevant set of questions. Prior to this, it should be ensured that the interviewees are related to the survey in some meaningful terms. A survey for estimating market potential for a new fluoride-based toothpaste brand should ask qualifying questions like the following.

Q Which type of toothpaste do you like?

A Fluoride Herbal Calcium

Depending upon the interviewee's response, the interviewer can further give directions to the next questions.

### 5.5.3 Warm-Up Questions

This stage plays on the respondent's mind by making him/her think of certain facts related to the survey questions. Questions like, 'When was the last time you bought toothpaste?'; 'Was it fluoride content or herbal?'; 'Looking back, can you recollect how many times you might have used fluoride toothpastes over the last 1 year?' tend to make the respondent think and recollect past experiences. A person who is straightaway asked such questions may not be interested in answering or providing details, but after a series of lead-in and qualifying questions, the resistance slowly decreases and gives way to cooperation.

### 5.5.4 Specific Questions

This stage consists of questions that are specific to the research objectives. As such, they are asked of participants who show a favourable response or are end users of the product, in this case, fluoride toothpastes. These questions tend to estimate the usage pattern and influential factors in using fluoride content toothpaste. These specific questions play a major role in data collection and analysis. After ensuring that enough rapport has been established, this section can probe to gain insight into sensitive issues.

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### 5.5.5 Demographic Questions

These are a necessary part of every survey. Responses to survey questions cannot be analysed until they are sorted out according to the different characteristics pertaining to the study. This is especially true for surveys that analyse responses based on the demographic characteristics of respondents. These usually consist of a set of questions related to age, sex, location, occupation, etc. These questions are kept to the end to avoid interviewee resistance and to prevent the interviewee's attention from being diverted.

## 5.6 Questionnaire Pre-testing, Revision and Final Draft

Pre-testing refers to testing the questionnaire on a small sample of respondents selected on a convenient basis that is not too divergent from the actual respondents. The aim is to identify and eliminate flaws and problems. Pre-testing includes testing all aspects of the questionnaire starting from the question content to question sequence. This helps reveal incomprehensible meanings, wrong order of questions, leading questions and awkward responses. No matter what the final mode of administration is, pre-testing should be done by personal interviews. This will facilitate interviewers to observe respondents' reactions and attitudes, giving them a first-hand experience of the potential problems and the data that can be expected from a questionnaire.

The responses gathered from pre-testing are coded to facilitate analysis. Pre-testing enables the researcher to revise the questionnaire by identifying flaws and eliminating any ambiguous questions. It also helps researchers to verify if interviewers resort to proper sample selection procedures.

After the revision, the research instrument is ready for its final draft, which is to be used for the actual survey.

## 5.7 Summary

A good questionnaire is imperative for good survey results. A questionnaire can be judged based on its relevance (no collection of unnecessary information) and accuracy (information should be reliable and valid). This chapter discussed the proper designing of a questionnaire for better results. As no established rules exist for such designing, the steps outlined in this chapter are taken from experiences accumulated through various studies. The first step in questionnaire designing is arriving at preliminary decisions regarding the issues of required information, the target respondents and the interview techniques to be adopted. This is necessary as the content, format, wording and sequencing of the questionnaire will depend on





these basic factors. The next step is to determine the questionnaire content, so that it deals with identifying the need for data, the question's ability to yield data, the participant's ability to answer without generalizations and estimates and willingness to answer sensitive questions.

Knowing how each question should be phrased requires familiarity with the different types of questions. This leads to the next step of the questionnaire designing, that is questionnaire response format. This deals with issues of using open-ended or close-ended questions. Open-ended questions require the respondent to do most of the talking while close-ended questions restrict the respondent's responses to the available options. Each has its own advantages and disadvantages and is suited to different interviewing techniques.

Experiences from previous researches have helped establish general guidelines regarding questionnaire wording and sequence. It should be ensured that questions resort to shared vocabulary and adequate alternatives for better understanding and response rates. The questions should be free of implicit assumptions, biased and loaded words. It should also be free of questions that are double-barrelled and that would provoke the respondent to provide generalizations and estimated answers. Questionnaire sequencing is very important to elicit required information from the participant. The opening questions should arouse the respondent's interest in the survey. The specific and general questions should be followed in order. This means that the questions are sequenced in the following manner: lead-in, qualifying, warm-up, specific and demographic.

Last, the questionnaire should be pre-tested before administration for detecting flaws and revised with necessary corrections and deletions. This would lead to the final draft to be used in the actual survey.

## Reference

- Labaw, Philip Gendall (1980) A framework for questionnaire design: Labaw Revisited, *Mark Bull* 1998, 9, 29–39

