Collecting primary data

CHAPTER

CHAPTER OBJECTIVES
After studying this chapter you should:

■ be able to define primary data and their role in research
■ apply a variety of techniques for collecting primary data
■ understand and apply triangulation
■ be able to draft a survey questionnaire
■ prepare for and carry out different types of interview
■ be able to record interviews systematically
■ understand and apply observational methods

INTRODUCTION
This chapter sets out to explain what primary data are, to examine the main approaches that are used to collect primary data and to discuss the nature of the data collected through the use of each approach. The aim of all of this is to provide you with a basic understanding of the methods and techniques that are available for you to use when you wish to collect particular types of primary data. We also discuss and explain the common uses of each method. As you will see, there are three main techniques, and the application of these is explained and discussed separately in the main sections of the chapter.

DEFINITIONS

Primary research is research that produces data that are only obtainable directly from an original source. In certain types of primary research, the researcher has direct contact with the original source of the data.

Primary data are data that were previously unknown and which have been obtained directly by the researcher for a particular research project.

Primary information is primary data to which meaning has been added; in other words, the data have been analysed, inferences have been drawn from them and, thereby, meaning has been added.

THE NEED FOR PRIMARY INFORMATION
The decision to collect primary data for your research project is influenced by the kind of research you are carrying out. The need for primary information is far more frequently related to the practical, rather than the academic aspects of study. For example, part-time students on professional courses are required to carry out investigative assignment and project work that is related to real organisations, usually their own sponsoring organisations. Primary data is less frequently needed for essays, which, by their nature, are traditional
features of degree courses. A third-year dissertation or a thesis for a higher degree such as an MBA, however, very often includes primary information.

You carry out primary research when the data you need is not available from published sources. For example, if you are carrying out an assignment, a major project or a degree dissertation, you may need information that is only available from key individuals, such as managers, a group of employees in an organisation, customers or other members of the public. Conversely, you may need to know how groups and individuals react to particular situations and ideas, or how they behave when they are carrying out their jobs.

THREE PRIMARY METHODS

There are three main methods you can use to collect primary data, and the method/s that you decide upon are determined by the type/s of data you need. The methods are:

- The survey method
- The interview method
- The observational method.

In a sense, the interview method is also a survey, but the word survey has become most frequently associated with questionnaires, so that when someone says 'I'm carrying out a survey', it is generally assumed that there is a questionnaire involved. The objectives when carrying out interviews are more or less the same as those when using questionnaires; Arnold et al (1991) say that the interview is, in effect, often used as a 'talking questionnaire'. However, the techniques used are different for each of the two approaches, so we will refer to them as questionnaire and interview techniques.

Unlike questionnaires or interviews, the observational method does not put questions to respondents; it collects data about behaviour. The researcher observes and records behaviour that is relevant to his or her research.

DEVELOPING A RESEARCH STRATEGY

When you are formulating your primary research strategy, you have to decide which of these approaches you think would be the most appropriate in terms of the kind of data you wish to collect. In the large majority of cases the decision is to employ more than one primary method (see below: triangulation). It is also important for you to understand and develop skills in the application of the techniques you may use when employing a particular method. Perhaps at this stage we should distinguish between what we mean by method and what we mean by technique. 'In our context, a method is a systematic and orderly approach taken towards the collection of data so that information can be obtained from those data. . . Techniques, in contrast, are particular, step-by-step procedures which you can follow in order to gather data, and analyse them for the information they contain' (Jankowicz 1995).

THE ‘METHOD EFFECT’

The choice of a particular method or methods is a very important decision in assignment and project work, since it is what we are doing and the kind of data that we need that determines how we should go about collecting it. According to Saunders et al, ‘there is an inevitable relationship between the data collection method you employ and the results you obtain. In short, the results will be affected by the method used. The problem here is that it is impossible to ascertain the nature of that effect. Since all different methods
Collecting primary data will have different effects, it makes sense to use different methods to cancel out the “method effect”. That will lead to greater confidence being placed in your conclusions’ (Saunders et al 2003: 99).

**TRIANGULATION**

This is the term used to describe combining several methods in the same single study. When setting your strategy, you may, for example, consider the possibility that relying on a single method may adversely affect the reliability and validity of the results – bear in mind that the ultimate conclusions you draw and the recommendations you make in your report will be based on your research results. In that context, it is certainly advisable to use at least one extra method in order to compare the two sets of results and cross-check the data. Lingering doubts may lead you to base your conclusions and recommendations on several methods, including secondary research, in which you can rework the findings from a set of data that has been collected for some other research purpose (see Figure 11).

Kane represents an archival review, questionnaires, interviews and participant observation as potentially overlapping in scope (Jankowicz 1995):

> If you had to stake your life on which of these is likely to represent the accurate, complete research information, you would choose the centre [of the overlap] in which you got the information through interviews and questionnaires, reinforced it by observation, and checked it through documentary analysis (secondary information) . . .. Here you are getting not only what people say they do and what you see them doing, but also, what they are recorded as doing (Kane 1985: 51)

Kane’s ‘belt and braces’ approach is not meant to imply that you should use as many of the techniques as you possibly can in order to sharpen up the quality of the results you get. Ideally, you should select

![Figure 11, Example of triangulation](image-url)
the techniques that will allow you to cross-check the data and use one set of results to corroborate another. Try not to overburden yourself unnecessarily with too many sets of results. It will not look impressive in your methodology section, not to mention the amount of time it will all take.

**KEEP YOUR EYE ON THE BALL**

When you are using any one particular method, you should ensure that your desire to demonstrate skill in choosing and using it does not allow it to take precedence over the reason why you needed it in the first place. Truly, you will earn extra ‘brownie points’ for demonstrating good research skills, but it is the

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**Case study**

Christine is the assistant HR manager in an insurance company in Bellchester, which is in the south of England. She has enrolled in a part-time MBA at the local university and at present is trying to identify a topic for her project.

The company directors have expressed concern about how employee performance is being managed. According to the records, the average performance has been teetering around the minimum standard. Last year’s performance audit indicated that progress was expected, but now, there is a discernible lack of zest and commitment in the internal environment.

It is generally accepted that the accumulative performance of any workforce is the main influence on the performance of the whole organisation. The present situation, therefore, has led the board to ask Julios, the HR manager, to have an investigation carried out and report back with an explanation and recommendations for a performance improvement programme. Julios has delegated the task to Christine, who is delighted, since she regards it as the answer to her search for a topic.

Christine has a fair understanding of performance management, but since most of her career so far has been spent in recruitment and selection, she knows that she now needs to learn as much as she possibly can about it, especially in terms of recent theory and developments in practice.

Drafting the methodology section of her proposal, she is now considering her research strategy. Obviously, she has to carry out a literature search and review in order to learn more about performance management and to understand what other writers have said about her topic.

She can also see, however, that she will also need to collect a considerable amount of data from within the company. She will have to examine performance records; talk to the senior managers to identify their attitudes towards and ideas about how performance should be managed; and talk to the middle managers to understand how it actually is managed. Also, she will need to gather data from the employees themselves, in order to assess why they think their performance has been suffering recently.

*Try to answer this question:*

What would you expect to see included in Christine’s research strategy?

*Answer in Appendix 4*
relevance and quality of the data you collect, as well as the methods you used to collect it, that will gather in most of the brownie points.

One cannot overemphasise the importance of thinking things through in advance of implementing the techniques. At first you may have thought that you needed to use just one primary technique, along with your literature review and any secondary data you may have collected. However, if you think deeply about your data collection objectives, you will find yourself using two, or even all three primary approaches. If you are doing your major project, a dissertation or an MBA project, you will have to include your research strategy in the methodology section of your proposal; you will need this to be as close a representation as possible to what you actually do, since one of the final assessment criteria may be the strength of the relationship between what you proposed and what you actually did.

QUALITATIVE AND QUANTITATIVE DATA

Some approaches to researching a particular phenomenon produce qualitative data, while other approaches produce quantitative data. Qualitative data are data that have not been quantified, although that is not to say that they have not been analysed. Qualitative analysis is carried out when, for example, during and after interviewing someone, you formulate an understanding of the meanings that can be attributed to their responses to your questions. You assess the value of the responses, the degree to which they are meaningful to your research objectives and their prospective usefulness in lending support to your arguments. By nature, qualitative information is subjective since it is the product of the respondent's personal opinions, values, attitudes towards and perceptions of the subject of the interview conversation. You collect qualitative data when you need the perceptions and opinions of key people as individuals, which inevitably means that you collect it from small groups.

Quantitative data are specific and, obviously, are data that have been quantified, such as when the data that are obtained from an occupational selection test are analysed using psychometric techniques, or when the results of a large-scale survey are analysed and quantified.

Distinctions between qualitative and quantitative data are drawn on several grounds because it is clear that different approaches to gathering data are specifically designed to produce either qualitative or quantitative data – for example, interviewing (qualitative) versus large-scale surveying (quantitative). Firstly, qualitative data tend to be obtained from small groups, such as a group of interviewees or a focus group, while quantitative data are obtained from large groups, such as a representative cross-section from the employees of a large organisation or from a large group of consumers. Secondly, there are variations in the reliability and validity of both types of data. Qualitative data tend to be high on validity and low on reliability, while the reverse is true for quantitative data. (For more detailed explanations of qualitative and quantitative data, see Saunders et al 2003; Jankowicz 2000; and Hart 1998: 53.)

The purpose of these explanations is to help to guide your decision-making when you are preparing your research strategy. Remember that collecting primary data is part of your total research strategy, and it is worth bearing in mind, therefore, that the data you collect should bear a strong relationship to the data you collected from your literature search, which, combined with your primary information should lend support to the main arguments you intend to present.

TECHNIQUES

It is vital to the success of your project that you develop the skills that will enable you to apply the methods you adopt. Techniques are there to guide you through this kind of research work; applied correctly and imaginatively, they take you through the process of using the methods. They are the practical means that we adopt, the actual steps that we take in order to get the research work done. In short, techniques tell us...
how to use the methods. Next in this chapter, we explain and discuss the techniques involved when we employ the main methods of collecting primary data.

THE SURVEY TECHNIQUE

In this section we use several words that are commonly found in surveying. Let us describe and define their meanings before we start.

- A survey is a technique in which a sample of prospective respondents is selected from a population. The sample is then studied with a view to drawing inferences from their responses to the statements in a questionnaire, or the questions in a series of interviews.
- Population is the term we use to describe the main group of people from which a sample is drawn. A population, therefore, may be an organisation’s workforce, a management group or a group of customers.
- A sample is a representative cross-section of people drawn from a population so that their responses may be studied.

The sizes of the samples and the structures of the surveys are determined by the kind of data that needs to be collected and from whom.

QUESTIONNAIRES

Most people are familiar with questionnaires. We see them being administered for a variety of reasons in many walks of life. TV companies use them to assess their programmes and viewing figures; marketing researchers use them to obtain people’s opinions of their products and services; and psephologists, who are briefed by the media and political parties, use them to obtain data about trends and habits in voting.

Occasionally, however, we receive questionnaires in the workplace asking our opinions of say, the pension scheme, or the organisation’s policies on health and safety, pay, holiday entitlement or promotion. The purposes of surveys that are carried out in organisations usually set out to:

- Identify employees’ attitudes towards something
- Elicit employees’ opinions of something
- Obtain data about employees’ characteristics
- Ask employees about their behaviour
- Obtain information about their perceptions of something in particular, such as the cause of a continuing problem.

At first glance, some of these purposes may seem similar, but there are subtle differences which, if ignored, could affect the quality of the data you ultimately collect. An opinion, for example, is an unproven belief or judgement about something such as the effects of mobile telephone masts on people’s health, whereas an attitude may be a disposition to act for or against something or a predisposition to respond consistently in a positive or negative way to some person, object or situation. An attitude, however, is not actual behaviour, but attitudes do cause people to behave in the way they do. Individual perception is a mental process. It is the process that gives us the ability to make sense of things in the world around us. Truly, these words are used conversationally and different meanings are attributed to them. In scientific terms, however, the true, non-colloquial differences are of paramount importance when we come to construct the question items for a questionnaire or for a series of interviews, since it is the precise wording of the questions that determines the relevance and types of responses we obtain. This brings us
back to considering the kind of data we wish to collect. Do you, for example, want people’s opinions of some event, object, policy or idea? Or do you want to elicit their attitudes towards it? If you consider the meanings of these words as they are stated above, you should be able to see how they influence the way you formulate your questions.

TYPES OF QUESTIONNAIRE

There are several different designs for survey questionnaires. Each design is governed by the purpose of the survey and the kind of data that the researcher seeks. All designs, however, must meet certain criteria. These include to:

- Measure what they are supposed to measure
- Be distributed to a random sample of people to whom the subject of the survey is relevant
- Be structured carefully so that the questions or statements are unambiguous and likely to elicit the data needed.

‘The survey method has both advantages and disadvantages. It can be used with people directly involved in the issues to be investigated. It can investigate their experiences in their day-to-day setting. It is relatively easy to conduct and makes relatively low demands on people’s time’ (Arnold et al 1991: 37). By using a survey questionnaire, you are not disturbing or controlling the normal routines of a setting.

One of the disadvantages of using a questionnaire, however, is that it keeps the researcher at a distance from the respondents, so that opportunities to probe, to go back to check an answer or have an answer explained further are denied. This is yet another reason for constructing the questions carefully in order to ensure that the quality of the responses meets with your expectations.

DESIGNING THE QUESTIONNAIRE

The questionnaire is the most widely used technique for collecting primary data. Depending on the nature of the data you are looking for, the form may ask questions, make statements, or do both. If you choose to use questions, always use closed questions, which are questions to which there is only one answer. If you are looking for answers to specific questions, then you need somehow to ensure that the answers you get are brief and to the point; otherwise, the subsequent task of analysis is going to be difficult. The questionnaire should be designed to head off such a problem. The design of a questionnaire includes:

1. The general layout of the questionnaire form
2. A statement of the purpose of the survey
3. The number of questions or statements
4. How the questions or statements are worded
5. The response system, eg tick boxes or a measured scale, and the conditions of response, such as the return date, anonymity and whether or not all questions should be answered.

It is critically important to get the design right since it affects:

1. The kind of data you collect
2. The number of responses you receive
3. The reliability and validity of the data
4. The quality of the responses.
When you use a questionnaire, all those in the sample are asked to respond to the same set of questions or statements. You cannot just sit down and draft a meaningful questionnaire in an arbitrary fashion. You need to think very carefully about the exact nature of the data you wish to collect before you start to frame your questions or statements. Do not fall into the trap of thinking that this is an easy task; it isn’t.

**QUESTIONING TECHNIQUES**

The most frequent question I am asked by students who wish to design a questionnaire is ‘where do I start?’ I always advise them to start by drafting the questions. It is the most difficult task in questionnaire design, but how the questions are asked does determine the rest of the design. One approach to this task is to brainstorm ideas about the questions that need to be answered and write them down. It is a random process, but the questions you come up with can be modified and placed in order afterwards. Doing it this way, you will probably finish up with too many questions, some that you can immediately reject. After discarding the obvious ones, check the remainder to see if you can improve the wording with a view to achieving exact and unambiguous meanings. You may still have too many – a large number of questions will reduce your response rate – but you should not discard questions arbitrarily. Again, study each question separately and carefully to see if it needs to be amended. There are criteria to help you to make such decisions in respect of each question. Czaja and Blair (1996) proposed a checklist for eliminating questions (see Figure 12).

When you have developed all of the questions you can, list them in a logical sequence and carry out a pilot study on a group and people who understand the subject of your research and your objectives. Show them to your tutor, who might have some suggestions for further questions or for amending the ones you do have. Remember that you have been deeply absorbed in the task, and to have someone look at the questions with an objective eye is usually very useful.

**THE ATTITUDE SURVEY**

A frequently used questionnaire in organisations is one that is designed to measure people’s attitude towards something. You may, for example, need to find out what the employees think of the design of the work system or the communication style of the managers. There are several techniques for this, one of which is the *self report questionnaire* in which respondents are asked to report their feelings, beliefs and behaviour towards the subject of the survey.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Does the question relate directly to some aspect of your research?</td>
</tr>
<tr>
<td>2</td>
<td>Will the content of the question convey the right information?</td>
</tr>
<tr>
<td></td>
<td>(If the answer is NO to both 1 and 2, drop the question; if YES to 1 and NO to 2, rewrite the question.)</td>
</tr>
<tr>
<td>3</td>
<td>Will all respondents understand the question in the same way?</td>
</tr>
<tr>
<td></td>
<td>(If NO, revise or drop; if YES, retain.)</td>
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<tr>
<td>4</td>
<td>Will all respondents have information to answer it?</td>
</tr>
<tr>
<td></td>
<td>(If NO, drop; if YES, retaining.)</td>
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<tr>
<td>5</td>
<td>Will most respondents be willing to answer it?</td>
</tr>
<tr>
<td></td>
<td>(If NO, drop; if YES, retaining.)</td>
</tr>
<tr>
<td>6</td>
<td>Is other information needed to analyse this question?</td>
</tr>
<tr>
<td></td>
<td>(If NO, retaining; if YES, retaining only if required information is available.)</td>
</tr>
<tr>
<td>7</td>
<td>Should this question be asked of all respondents, or only a subset?</td>
</tr>
<tr>
<td></td>
<td>(If only a subset, retaining only if the subset is identifiable beforehand or through questions in an interview.)</td>
</tr>
</tbody>
</table>

**Figure 12** Checklist for eliminating questions
**Semantic differences**

When you place a numerical rating scale against a number of questions, the difference between the numbers on the scale is usually equal; for example, if you take a five-point scale: 1 2 3 4 5, the difference between the numbers is 1. This, therefore, is an *equal interval scale*. However, when you look at statements that range from highly positive to highly negative, you will see that the difference in value between the values of the statements is not exactly equal. The trick, therefore, is to get the value difference between the numbers to match that of the statements. Obviously, you cannot amend the statements for this purpose, since that would affect the quality of the data you collect from them, so you have to change the numbers.

**THE THURSTONE APPROACH**

The Thurstone approach attempts to overcome this problem. Here the researcher develops a large number of potential questionnaire statements, ranging from highly favourable to highly unfavourable in terms of the respondents’ attitudes towards the *object*.

People, situations, events and ideas towards which people have attitudes are referred to as the attitude object. Thus, when considering my attitudes towards, say, the Prime Minister, then the PM is the attitude object. This means that I have feelings and beliefs about the PM, which may be positive or negative and which will determine my behaviour towards him (Currie 1997).

The researcher takes the potential questionnaire statements to a subset of the sample and asks them to rate the statements on an 11-point equal interval rating scale. Using these responses, the researcher discards some of the questions on the grounds that the subset respondents could not agree on them. The discarding process is continued until the researcher is left with about 20 statements, although it is normal practice to have 11 questions on a Thurstone scale. From Figure 13, you can see how the numbers have been manipulated to reflect the value differences between the statements.

The next step is to arrange the statements randomly on the questionnaire form. As you will see from the figure, the respondents are asked to tick against every statement with which they agree. An individual’s attitude is the mean (average) of the numerical values of all of the ticked statements. If, therefore, a respondent had ticked statements 5, 6 and 8 in Figure 13, the attitude score of that respondent would be 6.87, which would have been calculated thus:

\[
\frac{8.50 + 7.00 + 5.10}{3} = 6.87
\]

To calculate the accumulative attitude of the whole sample, simply summate the individual score and divide by the number of valid responses.

It is claimed that compared to other, simpler systems, the Thurstone rating scale produces a very accurate reflection of attitudes. Figure 13 represents the researcher’s master copy of the questionnaire. The numbers in the right-hand column are not included in the questionnaire that is distributed; instead, the right-hand column is used for the tick-box responses.
The company is considering reorganising the IT service and before making a final decision would like to hear your opinion of the service as it is now.

We would be grateful, therefore, if you would take the time to complete the attached questionnaire and return it through the internal mail in the envelope provided.

Important: this is an anonymous survey of your true opinions and you are asked not to include your name so that we can respect confidentiality.

<table>
<thead>
<tr>
<th>Statements</th>
<th>Numerical value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 The organisation’s IT service is excellent in all respects</td>
<td>11.00</td>
</tr>
<tr>
<td>2 All aspects of the IT service are very good</td>
<td>10.80</td>
</tr>
<tr>
<td>3 Most of what IT does for us is very good</td>
<td>9.30</td>
</tr>
<tr>
<td>4 Most of the time our IT service is very good</td>
<td>8.90</td>
</tr>
<tr>
<td>5 I like the way our IT service operates</td>
<td>8.50</td>
</tr>
<tr>
<td>6 Our IT service is probably as good as any other</td>
<td>8.00</td>
</tr>
<tr>
<td>7 Our IT service is not too bad</td>
<td>6.50</td>
</tr>
<tr>
<td>8 Our IT service could be better organised</td>
<td>6.00</td>
</tr>
<tr>
<td>9 Our IT service is somewhat disorganised</td>
<td>5.50</td>
</tr>
<tr>
<td>10 Our IT service could be considerably improved</td>
<td>5.00</td>
</tr>
<tr>
<td>11 Our IT service is a mess</td>
<td>0.50</td>
</tr>
</tbody>
</table>

Thank you for taking the time to complete this questionnaire.

Figure 13  An example of a Thurstone rating scale to measure employee attitudes towards the quality of the organisation’s IT service

**THE LIKERT APPROACH**

This is another of the most commonly used rating scales, sometimes referred to as the *summated scale*. It is one in which you ask the respondent to tick a box or circle a number that appears against the statement that most accurately reflects their feelings and beliefs about an attitude object. As in the Thurstone approach, the researcher develops a large number of statements, which should be clearly for or against the attitude object. The Likert technique can employ a rating scale of four, five, six or seven points. Using the longest scale, the data is more accurate and refined, but they do take longer to analyse. There have been several approaches to the steps to be taken before reaching the final set of statements, although the basic principles are the same. Firstly, a panel of judges or a subset of the sample is asked to indicate their agreement or disagreement with each statement. Secondly, you compare the responses and select only those statements that are similar in the way in which they were responded to and those which drew the same responses on at least two occasions. Thirdly, you write up your final list.

Writers vary over how many statements you should aim to include in the final list. In making this decision, you should try to strike a balance between two main factors. Clearly, your data collection objectives must come first, but you should also bear in mind that a list that is too long can reduce the response rate. An additional inhibiting factor is the length of the rating scale. If, for example, you were to draft a questionnaire containing too many statements and, say, a seven- or nine-point scale, your response rate would be reduced considerably. These are factors that affect both the response rate and the accuracy and refinement of the data you ultimately collect. To ease your understanding, in the example that follows (Figure 14) I have used only 10 statements and a five-point scale. The respondents are asked to rate the degree to which the intrinsic design of their jobs motivates them to become involved.

Another approach to questionnaire design using the Likert scale is to place each statement above the scale itself and show the respondents the extent to which they are being asked their opinion. The
Please circle the number that most accurately reflects your feelings

<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
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<tbody>
<tr>
<td>I have enough responsibility</td>
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<tr>
<td>I have too much responsibility</td>
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<tr>
<td>I have enough authority</td>
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<td>I have too much authority</td>
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<tr>
<td>My job is a complete task</td>
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<td>I only do part of a total job</td>
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<td>I can demonstrate my skills</td>
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<td>Too much of the job is automated</td>
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<td>The job is interesting</td>
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<td>The job is boring</td>
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<td>Others benefit from what I do</td>
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<td>My job does not benefit others</td>
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<td>I can make my own decisions</td>
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<td>I have to follow strict routines</td>
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<td>I know how well I am doing</td>
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<td>My job is for no feedback from the job</td>
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<td>My work is highly valued</td>
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<td>My work is for granted</td>
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<td>I have total discretion</td>
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</tr>
<tr>
<td>I have to stick to the rules</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(The statements in the figure are based on the Hackman and Oldham (1976) Job Characteristics Survey in which the intrinsic factors of a job are said to generate job involvement, as opposed to the extrinsic factors, which are said to generate job satisfaction.)

**Figure 14** An example of a Likert questionnaire using a five-point scale and 10 statements

The respondent is asked to circle the number against the statement that most closely reflects his or her opinion. For example:

I have too much responsibility

1 strongly disagree

2 disagree

3 don’t know

4 agree

5 strongly agree

Within this scale the ‘don’t know’ option is given to those who (i) do not have enough information about the attitude object to justify expressing an opinion; (ii) they are indifferent to the attitude object; (iii) they are ambivalent, in the sense that they think that the good and bad points about their jobs are about equal.

Notice that in all questionnaires, there is only one attitude object and only one aspect of that object in each question or statement. You cannot measure people’s attitudes towards several objects on the same questionnaire.

**COLLECTING DATA THROUGH INTERVIEWING**

The interview has been called ‘a conversation with a purpose’, and more formally ‘a purposeful discussion between two or more people’ (Kahn and Cannell 1957). You can collect data using structured, semi-structured or unstructured interviews.

**Definitions**

1 A **structured interview** is one in which the interviewer simply reads out a set of closed questions in a particular order and notes the interviewee’s responses. Structured interviews are sometimes referred to as **standardised interviews** (Healey and Rawlinson 1994).
2 A semi-structured interview is one in which the interviewer has a pre-set type and order of questions, but is prepared to add to the number of questions, vary the theme of the interview and the order in which the questions are asked if doing so is of benefit to the research objectives.

3 An unstructured interview is one in which the interviewer starts with a single theme; some questions may be written down, but the whole ambience is one of informality, so that the interviewer may explore the several aspects of a complex issue in depth by asking open questions, which are questions designed to invite explanatory or detailed answers. In some unstructured interviews there is more than one interviewee, depending on the areas you wish to explore and the different expertise that may be required.

Semi-structured and unstructured interviews are sometimes referred to as non-standardised interviews (Healey and Rawlinson 1994).

**STRUCTURED INTERVIEWS**

When you are stopped in the street by researchers carrying clipboards, they usually want to ask you questions about last evening's TV, a product, a recent event or a proposed action, such as the building of a new road that would affect the immediate locality. In the clipboard, they have a list of set questions, and if you agree to answer them, they will simply read them out from the list and note your responses. Everyone who cooperates is asked the same set of questions, which means that the interviewer is conducting a structured interview. The process of carrying out the structured interview sounds simple, but the whole business of interviewing involves considerable skill. Just as when you are constructing a questionnaire, care has to be taken over formulating the questions and the order in which they are asked. Also, when you are face to face with the respondent, how the questions are asked is also important, including your visible manner and any emphasis you may deliberately or inadvertently place on particular words or phrases in the question. Unlike the distributed questionnaire, therefore, you do have a strong element of control over the situation in which the questions and responses are dealt with. For the same reasons, you would have the same degree of control conducting a series of structured interviews among managers or small group of other key people in an organisation.

**SEMI-STRUCTURED INTERVIEWS**

Unlike the structured, the semi-structured interview does allow the respondent to talk freely, expand upon answers and even change the theme of the interview. That is fine as long as the interviewee (i) does not digress to the extent that they depart from your research subject, and (ii) is contributing to the kind of data you are trying to collect.

**UNSTRUCTURED INTERVIEWS**

When you are carrying out an unstructured interview, you are playing the role of moderator or the chair of a meeting, and to elicit any meaningful data from such meetings, you need to develop appropriate skills. The main advantage of unstructured interviews is that they allow you to probe in a greater depth than you can when you are limited to the confines of a set of predetermined questions. Saunders et al (2003: 247) refer to unstructured interviews as in-depth interviews.

The advantages of semi-structured and unstructured interviews are firstly, that you hear different views expressed about the same topic or issue as you progress from one interview to the next. Secondly, when you are summarising and collating the data you have collected and find something that needs expansion or explanation, you can go back to the interviewee to obtain such clarifications.
USES OF INTERVIEWS

It is clear from what is said above that the decision about the most appropriate type of interview is a critically important one; in fact, your research may include more than one type. You may, for example, decide to collect both qualitative and quantitative data. When you conduct unstructured interviews, clearly, you are collecting qualitative information, which you glean from the flow of conversation. On the quantitative front, however, you may also use such probing, in-depth interviews to identify the variables you will need in order to design your survey questionnaire or list of questions for a fully structured interview.

FOCUS GROUPS

Alternatively, you could organise a focus group consisting of just a few people and in which you, the researcher, may loosely lead the meeting. Because of your role, the focus group is, in effect, an unstructured interview because your role is to guide the conversation and keep it to the central theme, or at least to a theme that, when discussed, is likely to produce data that would contribute to your research. Keeping control of the general conversation is a skilled social activity, and researchers vary in their ability to do this effectively. You have to recognise when to allow the conversation to flow and when to steer it towards a new direction. The objective is to make the best possible use of the knowledge and expertise of people in the group. What they say during the conversation may give rise to further questions that you think need to be answered. Always plan the duration of the meeting. Put together a number of questions that you think can be discussed, conclusions reached and useful data obtained. The more complex the questions are, the greater the amount of time the meeting will take.

TELEPHONE INTERVIEWS

The quality of the data that you can collect on the telephone is determined primarily by your own telephone skills. Table 8 provides you with some indication of the effectiveness of using the telephone to conduct particular types of interview.

The effectiveness of the interview may also be reduced by distractions at the other end. You are in a good position to control things at your end, but if you are telephoning, say, a busy manager you have no way of knowing what is going on at the other end.

<table>
<thead>
<tr>
<th>Interview type</th>
<th>Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structured</td>
<td>Effective, depending on telephone skills at both ends. A prolonged interview may reduce effectiveness Advice: Adopt the method when convenient to both sides</td>
</tr>
<tr>
<td>Semi-structured</td>
<td>Fairly effective. Lacks the influence of face-to-face contact, which could inhibit breadth and depth of exploration of subject Advice: Adopt the method only when face-to-face cannot be achieved</td>
</tr>
<tr>
<td>Unstructured</td>
<td>Least effective. Lacks the influence of face-to-face contact Can only talk on a one-to-one basis Lacks the required conversational flow Advice: Avoid where possible</td>
</tr>
</tbody>
</table>
The point should also be made that cost is also a factor. You may think that you are saving time and money by not travelling, but the likelihood that you will be making the call during business hours is very high, and that, of course, is exactly when the telephone companies charge their highest rates.

NOTE-TAKING AND RECORDING

In this section, we are mostly concerned with note-taking and vocalised recording of conversations in semi-structured and unstructured interviews. Normally, in a structured interview, people expect you to take notes. Such notes are normally brief and to the point, and the design of the form on which you have your interview questions listed should also include a space for the responses next to each question (see Table 9).

From the table you can see that the notes you are taking are answers to closed questions and, therefore, do not take long to write down.

The time you spend interviewing people at semi-structured and unstructured interviews is very precious, but it is time wasted if you fail to make accurate records of the data made available to you during the event. It can be difficult to hold a reasonable conversation with someone, let alone control the meeting, if concurrently you are trying to keep abreast of what is being said by writing continuously. Also, if you sit there making copious notes, you will inhibit the free flow of conversation and, indeed, may even lose valuable data that would have come out instead of those embarrassing silences.

It is the foresight and the skill with which you plan the event that determines how smoothly the interviews run. I use the word ‘foresight’ because it is worth taking a little time to think about all of the administrative tasks you can carry out before the event. You know the theme/s you are going to be handling and the questions to which you need answers. One approach to handling this is to set up a document that will enable you to make a comprehensive record of the event. Do one page for each interviewee and divide it into sections (see Figure 15).

There is more writing space than the figure indicates since it represents a whole page. Alternatively, you could use a landscape page set-up.

Using a system like this, you can fill in sections 1 to 4 in advance of the interview. During the interview, all you will appear to be doing is making the occasional note without interrupting or inhibiting others and allowing you to listen and participate. Figure 15 is just an example. Depending on the kind of data you expect to collect, you may decide to divide the page into a greater or smaller number of sections with appropriate headings. Having it there in front of you during the interview means that you do not need to make any preparatory entries; you will have a concise record of who said what, and the section headings will remind you to draw out the main points and the various facets of any argument. It will give a routine to your note-taking, and as you build on your interviewing experience, you will become more adept at using it.

Table 9  Abstract from a typical structured interview form

<table>
<thead>
<tr>
<th>Questions</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Excluding overtime, how many hours are there in your normal working week?</td>
<td>Normally I work 40 hours</td>
</tr>
<tr>
<td>2. Do you work any overtime?</td>
<td>Yes</td>
</tr>
</tbody>
</table>
VERBAL RECORDING MACHINES

Some people react negatively to the prospect of having their conversation recorded. For ethical reasons and as a common courtesy, you need to obtain their permission to use a recording device, which is something you can do in advance of the interview. The interviewee should be given some control over the use of the machine. For example, the answers to some of the questions you ask may be politically sensitive, but the interviewee may be prepared to answer your question if the machine is switched off while he or she is speaking.

Advantages and disadvantages

The advantages and disadvantages of using a recording device are related to the type of interview you are conducting, ie semi-structured or unstructured, one-to-one, one-to-several, and people’s reactions to the machine itself.

Obviously, a recorder will hold the most precise and unbiased account of a one-to-one interview, but with several participants, as there are in some unstructured interviews and focus groups, it is sometimes difficult to identify who said what when you are reviewing the interview at a later stage, although you may ask the participants to state their names before they speak. A group of interviewees will normally react more positively to the use of a recorder, but in a one-to-one interview the interviewee’s awareness of it may make it difficult to establish a good rapport. One further problem is that the interviewee’s awareness of the machine may cause them to divide their attention between you and it, especially at the beginning of the interview.

If you borrow a recorder that your great grand-parents have had for many years, you may find it cumbersome, difficult to operate and inefficient. Always use a free-standing battery-driven machine that

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Figure 15  A standardised page layout for taking interview notes

1. Interviewee name ………………………………………………………………
2. Date……………………
3. Main theme/s:
4. Questions: 5. Responses:
6. Main points made:
7. New information:
Table 10  Advantages and disadvantages of using a recording device

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Records a precise and unbiased account of the interview</td>
<td>May disrupt rapport, especially at the beginning of the interview</td>
</tr>
<tr>
<td>Several people being interviewed concurrently usually react more positively to it</td>
<td>After the interview it is sometimes difficult to identify who said what when there were several interviewees</td>
</tr>
<tr>
<td>Allows interviewer to concentrate, listen and participate more fully</td>
<td>Technical problems, such as expiring battery interrupting flow</td>
</tr>
<tr>
<td>Allows for a more confident review of the interview conversation</td>
<td>Transcribing a recording can be very time-consuming</td>
</tr>
<tr>
<td>Provides a permanent record of exactly what was said</td>
<td>May cause interviewee to divide his/her attention between you and the machine</td>
</tr>
</tbody>
</table>

you can place on a surface that is within your reach, but not too close to the speaker/s; after a while they tend to forget that it is there. Check the capacity of the tape to ensure that it is large enough to keep recording for the total duration of the session; you can get tapes that will last up to four hours. Finally, it is embarrassing if the battery runs out so take a spare.

Using a modern recorder will help to head off some of these problems. You may decide to use a digital recorder, most of which are quite small and unobtrusive; furthermore there is no tape to expire, and you can use long-life batteries. In most models, the storage capacity in terms of time is three hours, which is fine for most interviews, but in some models it is longer than that. You can also get them with a remote microphone facility, but now we are talking real money. These advantages and disadvantages may be summarised (see Table 10).

**THE TIME FACTOR**

Many students underestimate the amount of time they should allow for interviews. The position of a prospective interviewee in the organisation and the likely demands upon his or her time should be considered. The time factor is an issue that should be considered carefully, and you should refer to it during your first contact with the prospective interviewee.

Depending on the nature and complexity of the subject, interviews can take anything from one to three hours. Key people in organisations, for example, often cannot afford so much time. They may, however, agree to a shorter interview; especially if the subject of your research has excited their interest. It is a good idea to make an estimate before you make contact and add a 10 per cent contingency time allowance so that the prospective interviewee can reserve sufficient time for you. You may not need that extra time, and if you do not, at least it will make you look efficient.

Another possibility is that they may agree to two or even three shorter interviews so that the subject can be dealt with thoroughly. This means, however, that your notes and/or vocal recordings have to be labelled and stored carefully in order to ease the task of picking up the threads from where you left off. An advantage that is worth mentioning, however, is that the time between interviews may turn into ‘soak’ time (see Chapter 6), in which the interviewees reflect upon what was said in one interview and come to
the next one armed with further questions and ideas for discussion, which can only improve the quality of
the data you collect.

When you are making these arrangements, you usually do it on the telephone. You may find yourself
talking to someone whom you regard as important. So here you are, a mere student, talking, perhaps, to
a senior company manager. I know from personal experience that many students feel this way, but you
have to sound confident and be relaxed; what you are doing is also important. You have to find a balance
between sounding respectful (which you must) and obsequious (look it up!), which you mustn’t. If you
achieve the right balance you will instil his or her confidence in you. If they refuse to be interviewed,
remain respectful and just accept it.

**USING OBSERVATIONAL METHODS**

There are two approaches to collecting primary data through the use of observational methods. The first is
**structured observation**, in which the researcher simply observes and records behaviour. The second is **participant observation**, in which the researcher actually takes part in the behaviour being studied.

**STRUCTURED OBSERVATIONAL TECHNIQUES**

We are all familiar with the old-fashioned **work study practitioners** who, with their clipboards, stopwatches,
pens and pads stood and observed people working. They were using **structured observational methods**, which are quantitative. They may have wanted to know how many times a person carried out a cycle of
work activity within a particular period of time; and if a different method of working would improve pro-
ductivity.

Unlike the data gathered from an interview, this kind of observation records irrefutable **facts** about
people’s behaviour. However, structured observation is quite a ‘cold’ exercise in that it tells us little about
the subject’s emotions – their reactions to what they have to do and their thoughts and feelings about it.
Those being observed are usually aware of what you are doing and, for ethical reasons, they should be
told anyway. Exceptionally, when there is no alternative and when the observation subject is sufficiently
important to justify it, covert observation takes place. Obviously, this raises ethical issues. Researchers
do not normally set out to deceive people. On the other hand, the transparency of the observation
creates a dilemma because in certain circumstances the probability of collecting accurate data is reduced
markedly since those being observed seldom behave in the way they would normally. Undoubtedly,
behaviour departs from the norm when people are aware that they are being watched; this is a
phenomenon that was observed during the Hawthorne studies in Chicago in the 1920s. Another form of
deception takes place when as part of an ostensibly overt observation exercise, such as participant
observation (see below), the behaviour that is being observed by the researcher may be outside the
limits of his or her stated intentions.

**PARTICIPANT OBSERVATIONAL TECHNIQUES**

By nature, **participant observation** is qualitative. As a generalisation, it is safe that say that everyone is a
participant observer. If you are a member of a group such as a sports club or a political party, you are in a
good position to observe the values, motives and behaviour of your fellow members and to share with them
the experience of being a member. All of these are characteristic features of formal participant observation
in which you gather such information about those within the group. In the formal research situation, how-
ever, you become fully involved with them and their activities, and they usually know why you are there.

It is important to understand that the **situations** being described here are **natural settings** in which you are
unable to exercise any control over the variables. This is not meant to imply that you would wish to
exercise control over the variables, because the whole point of participant observation is to observe people in their natural settings. A natural setting as opposed to a laboratory setting is ‘a research environment that would have existed had researchers never studied it’ (Vogt 1993: 150).

Some writers say that because you cannot control the variables in a natural setting, you may observe the behaviour in a second, or even a third, natural setting and then draw comparisons. This, however, assumes that the environment, which plays a significant role in determining people’s behaviour, is the same in all settings. In fact, there is no such thing as identical settings, since the people in them are different and so will be their behaviour, which means that you would not be comparing like with like. One approach to solving this problem may be to use two observers concurrently in the same setting, which has the additional benefit of reducing the chance of something being missed or misinterpreted.

PROBLEMS WITH OBSERVATIONAL TECHNIQUES

Two problems associated with observational techniques are response bias and observer bias. Response bias occurs when someone who knows that he or she is under observation behaves in ways that are designed to provide the researcher with information that the person observed thinks the observer seeks (in an effort to ‘help’ science). If this goes undetected, it may contaminate the data.

Observer bias occurs when two observers place different interpretation on some item of behaviour. Obviously, no two interpretations are ever exactly the same, but when they are markedly different, we have to either reach a compromise about the meaning of the behaviour, or simply agree to differ. It could, of course, be behaviour that is normally repeated, in which case both observers could be on hand to observe it concurrently and then reach an agreement.

While observational methods are used less frequently than surveys and interviews, they are always worth considering for your total research strategy, depending, of course, on the nature of what you are researching. It is worth repeating that the reliability and validity of data is increased by the evidential corroboration and cross-checking that the use of more than one method of data collection provides.

CHECK YOUR UNDERSTANDING

Questions

1. Define primary data
2. What are the three main methods of collecting primary data?
3. What do we mean by triangulation?
4. What is the difference between methods and techniques?
5. Give two examples of techniques that produce quantifiable data and two that produce qualitative data
6. (Read question 7 before you answer this one.) How might interviews be categorised?
7. List and qualify at least three ways in which interviews may be conducted
8. What are the five main points of questionnaire design?
9. What are the main disadvantages of using a recording device?
10. What would you gain from carrying out a pilot study of a questionnaire?

Answers in Appendix 4
FURTHER READING


