

8

DESIGNING AND ADMINISTERING QUESTIONNAIRES

You will only reach the stage of designing a questionnaire after you have done all the preliminary work on planning, consulting and deciding exactly what you need to find out. Only then will you know whether a questionnaire is suitable for the purpose and is likely to be a better way of collecting information than interviews or observation, for example. If it is, then you will need to ensure you produce a well-designed questionnaire that will you give you the information you need, that will be acceptable to your subjects and that will give you no problems at the analysis and interpretation stage.

It is harder to produce a really good questionnaire than might be imagined. They are fiendishly difficult to design and should never be considered by anyone who believes that 'anyone who can write plain English and has a modicum of common sense can produce a good questionnaire' (Oppenheim 1992: 1). Of course, as Oppenheim says, common sense and the ability to write plain English are always a help in any walk of life, but designing a questionnaire requires rather more. It requires discipline in the selection of questions, in question writing, in the design, piloting, distribution and return of the questionnaires. What is more, thought has to be given to how responses will be analysed *at the*

design stage, not after questionnaires have been returned. If you send out questionnaires and just hope for the best, you may find the returns are impossible to deal with.

Exactly what do you need to find out?

Your preliminary reading and your research plan will have identified important areas for investigation. Go back to your hypothesis or to the objectives and decide which questions you need to ask to achieve these objectives. Then write out possible questions on cards or on separate pieces of paper, to aid ordering at a later stage. You will need several attempts at wording in order to remove ambiguity, to achieve the degree of precision necessary to ensure that subjects understand exactly what you are asking, to check that your language is jargon free, to decide which question types to use and to ensure that you will be able to classify and analyse responses. Guidance on analysis is provided in Chapter 12, and before you complete your questionnaire design, you should read this chapter carefully. Time spent on preparation will save many hours of work later on.

Question type

The more structured a question, the easier it will be to analyse. Youngman (1982) lists seven question types as follows:

Verbal or Open
: The expected response is a word, a phrase or an extended comment. Responses to verbal questions can produce useful information but analysis can present problems. Some form of content analysis may be required for verbal material unless the information obtained is to be used for special purposes (see pages 128–9 in Chapter 7). For example, you might feel it necessary to give respondents the opportunity to give their own views on the topic being researched – or to raise a grievance. You might wish to use questions as an introduction to a follow-up interview, or in pilot interviews where it is important to know which aspects of the topic are of particular importance to the respondents.

Well-structured questions will not present so many problems at the analysis stage.

List	A list of items is offered, any of which may be selected. For example, a question may ask about qualifications and the respondent may have several of the qualifications listed.
Category	The response is one only of a given set of categories. For example, if age categories are provided (20–29, 30–39, etc.), the respondent can only fit into one category.
Ranking	In ranking questions, the respondent is asked to place something in rank order. For example, the respondent might be asked to place qualities or characteristics in order.
Quantity	The response is a number (exact or approximate), giving the amount of some characteristics.
Grid	A table or grid is provided to record answers to two or more questions at the same time.
Scale	There are various stages of scaling devices which may be used in questionnaires, but they require careful handling (more about scales in Chapter 12).

Students have discovered that once they have tried out and become familiar with different ways of analysing and presenting questionnaire responses to list, category, ranking, scale, quantity or grid questions, they are able to select the most appropriate format when they come to the stage of designing and analysing data in their project.

Question wording

Ambiguity and imprecision

Words which have a common meaning to you may mean something different to other people, so you need to consider what your questions might mean to different respondents. For example, suppose you wanted to find out how much time mature students spend studying. You ask:

How much time, on average, do you spend studying?

You invite your respondent to tick the box for 'a great deal', 'a certain amount', or 'not much'. What will you do with the responses? What will they mean? 'A great deal' may mean something different to student A than to student B. In any case, students may spend 20 hours a week at some times of the year but probably not more than four at other times. What is 'average'? If you really wish to know how much time students spend studying, you will need to find different ways of putting the question. When you think about this topic you may decide you have to ask students to keep a diary for a specific period of time. You may need to specify the time spent studying different subjects. It will all depend on exactly what it is you need to know. Once you are clear about that, you will be able to word your questions sufficiently precisely to ensure that they mean the same to all respondents.

Precision in wording is important. Remember that concepts such as 'satisfaction' and 'class' can't actually be observed. There are many 'satisfaction questions' in the questionnaires which regularly come through my door, from banks, credit card companies, hotels, shops, hospitals, financial advisers – and many others. 'How satisfied are you with . . .?', or even 'Are you satisfied with . . .', with an instruction to tick the Yes/No box. Satisfaction is a concept and as we can't actually observe concepts, we have to find different ways in which they might be observable, and therefore measurable. Rose and Sullivan provide a useful example of ways in which the concept of 'class' might be measurable. They write that:

> If we wish to understand something about class (a concept and therefore . . . not observable), what can we observe in the world which manifests class? That is, what indicators can be used for class so that we can obtain data about class? This is the essence of the measurement problem and when we link an unobservable concept with an observable indicator we are producing **operationalizations**.
>
> (Rose and Sullivan 1996: 12–13)

They explain that 'operationalizable' refers to 'the rules we use to link the language of theory (concepts) to the language of research

(indicators)'. So, what indicators of 'class' or 'satisfaction' might there be? Think about it. Ask friends, colleagues, family members for measurable alternatives, and as always, go back to the beginning and ask yourself, *what do you really need to know?*

Assumptions

If respondents are confused, irritated or even offended, they may leave the item blank or even abandon the questionnaire. You want answers to all questions if at all possible, so try to avoid confusion and watch out for assumptions. Consider the question 'Which type of school does your child attend?' The respondent is asked to tick in the appropriate box from a long list of types of school. The researcher has assumed the respondent has one child, but what if she has no children? Does she ignore this question? What if she has more than one child – one in an infant school, one in a high school, and so on – what does she do then? Does she put the number of children in the appropriate box? Are you prepared for a category response, or had you intended this to be a list? It may not matter, but if your analysis is planned on the basis of a category response, you will give yourself extra trouble when list responses are given. Incidentally, your respondents might well ask why you want this information. Do you? Is the information essential for your study? If not, leave it out.

Memory

Memory plays tricks. If you were asked to say which television programmes you saw last week, could you remember everything? Could you be sure that one particular programme was last week – or was it the week before? Consider the following question, which appeared in a questionnaire concerned with parents' education.

What subjects did you study at school?

If respondents left school recently, they may be able to remember quite clearly, but if they left school 20 or more years ago, they may

find it difficult to remember. If they do not include English in the list of subjects, would that mean that no English was studied or did they just forget to include it? Consider what information you really need. If you want to know which of a list of subjects that respondent studied, you might decide it would be better to provide a list of subjects which can be ticked. That way, you would ensure that main subjects were covered – but the type of question will depend on the type of information needed.

Knowledge

Take care over questions which ask for information that the students may not know or may not have readily to hand. For example, it may seem reasonable to ask mature students what the criteria are for allocating students to tutorial groups. But the likelihood is that they will not know: and if respondents have to search for information, they may put questionnaire to one side until they have time – and forget all about it.

Double questions

It may seem obvious to remind you that double questions should never be asked, but it's easy to overlook the following type of question:

> Do you attend research methods and statistics courses?

Would the answer 'Yes' mean that you attend both, or one? If you need to know, the question should be divided into:

> Do you attend research methods courses?
> and
> Do you attend statistics courses?

It's common to come across questionnaires with double questions, particularly in hotel feedback forms such as:

The management is always looking for ways of improving the service to guests. We should be grateful if you would circle the appropriate number below and return the completed form to reception.

How would you rate the service and cleanliness of the hotel?

Excellent	Very good	Good	Satisfactory	Less than satisfactory
5	4	3	2	1

I found this in the bedroom of a large chain hotel and all the following questions followed a similar format. Assuming any of the guests bothered to complete the questionnaire, I can imagine that responses to 2–5 would be grouped together and would therefore provide 'evidence' that 95 per cent of guests were very satisfied with the service and cleanliness of the hotel. The double question is obvious but there are other issues in this item. Perhaps you considered the service was good in parts. Helpful, pleasant and efficient receptionists; chamber maid who did a remarkably good job, *but* the porter was surly and the restaurant service appalling. As far as cleanliness was concerned . . . well, I won't go on.

Likert scales (originally devised by R. Likert in 1932) of the kind used in this hotel questionnaire are devices to discover strength of feeling or attitude towards a given statement or series of statements and the implication here is that the higher the category chosen, the greater the strength of agreement, but care has to be taken not to read too much in these ranked scales. They are usually, though not always, on a three, five or seven-point range and ask respondents to indicate rank order of agreement or disagreement by circling the appropriate number. They certainly arrange individuals or objects from the highest to the lowest, but the intervals between each may not be the same. We cannot say that the highest rating (5 in the hotel example) is five times higher than the lowest (which is 1). All that can be said is that they indicate order. In spite of these limitations, Likert scales can be useful, as long as the wording is clear, there are no double questions, and no unjustified claims are made about the findings.

Leading questions

It's not always easy to spot a leading question, but the use of emotive language or the way a question is put can lead respondents to answer questions in one way. For example:

> Do you not agree that mature students should have the right to express their views in tutorials?

Well, it might be difficult for students to answer 'No' in response to that question.

Presuming questions

Presuming questions are often a source of error in questionnaires. When they are included it is often because the researcher holds strong views about a subject and overlooks the fact that everyone may not feel the same way. For example:

> Does the university/college/hospital make adequate provision for counselling?

Is that for students, patients, staff – who else? You may think all institutions should provide a counselling service. But what if your respondents do not? What if they do not really know what a counselling service does? In its present form, 'adequate' is meaningless. There is a presumption in the question that a counselling service is necessary, and that makes the question invalid.

Hypothetical questions

Watch for questions that will provide only useless responses. Most hypothetical questions come into this category. For example:

> If you had no family responsibilities and plenty of money, would you travel around the world and live in 5* hotels?

But, a respondent might answer, 'I do have family responsibilities. I have no money and never shall have as far as I can see, so what's the point of thinking about it?'

Offensive questions and questions covering sensitive issues

It goes without saying that questions that may cause offence should be removed. If you really need information on what might be regarded by some respondents as sensitive issues, you will need to take extra care in the wording and positioning of questions. Some researchers think it is better to place such questions towards the end of the questionnaire, the theory being that if respondents abandon the questionnaire at that point, you at least have answers to all the earlier questions.

Age is often considered to be in the sensitive category and rather than asking respondents to give their exact age, it may be better to ask them to tick in boxes to indicate age category (perhaps 21 or younger; 22–25; 26–30 etc. Be careful not to have overlapping categories. It's quite common to see age categories listed as 21 or less, 21–25, 25–30, etc.

Appearance and layout



An excellently prepared questionnaire will lose much of its impact if it looks untidy. Look at some of the published surveys which used a questionnaire as one method of data collection and they will give you ideas about layout. Recipients need to be encouraged to read and to answer the questions and they may be put off by a scruffy document that has been hastily prepared. There are no hard-and-fast rules about layout, but there are a few common-sense guidelines that will help appearance.

1 Questionnaires should be typed, word-processed (or printed if you are conducting a very large survey).
2 Instructions should be clear (in capitals, or in a different font).

3 Spacing between questions will help the reader and will also help you when you analyse responses.
4 If you want to keep the questionnaire to a limited number of sheets, it may be better to photo-reduce copy.
5 Keep any response boxes in line towards the right of the sheet. This will make it easy for respondents and will help you to record responses.
6 If you intend to use a computer program, allow space on the right of the sheet for coding, if necessary. Find more about coding in Chapter 12.
7 Look critically at your questionnaire and ask yourself what impression it would give if you were the recipient.
8 Take care over the order of the questions. Leave sensitive issues to later in the questionnaire. Start with straightforward, easy-to-complete questions and move on to the more complex topics (writing questions on cards or separate pieces of paper will make it easy to sort and re-sort questions).
9 Remember your promises of anonymity and confidentiality. Refer back to Chapter 3 if you've forgotten. Keep names off questionnaires if at all possible.

Drawing a sample



The number of subjects in your investigation will necessarily depend on the amount of time you have. If you are working on a 100-hour project, you will not be able to include all mature students in the country. If you have decided to restrict your research to one institution, then you will need to find out how many mature students there are. If there are 100, it will be unlikely that you will have the time or the means to include them all. You will need to select a sample.

In very large surveys, like the census, sampling techniques will be employed in order to produce a sample which is, as far as possible, representative of the population as a whole. Generalizations can then be made from the findings. In small studies, we have to do the best we can.

All researchers are dependent on the goodwill and availability of respondents, and it will probably be difficult for an individual

researcher working on a small-scale project to achieve a true random sample. If that proves to be the case, you may be forced to interview anyone from the total population who is available and willing at the time. Opportunity samples of this kind are generally acceptable as long as the make-up of the sample is clearly stated and the limitations of the data are realized. However, even in a small study, efforts should be made to select as representative a sample as possible. Say you decide to include 50 per cent of your population. A random sample will give each of the individuals concerned an equal chance of being selected. You may decide to select alternate names on an alphabetical list, the first person being selected by sticking a pin in the paper. Everyone selected may not be willing to participate, and so it is wise to have reserve names available. For example, if the twentieth person refused or was not available, you might have decided *beforehand*, and as part of your research design, to approach the twenty-first.

There may be occasions when you wish to include representative sub-groups. You perhaps wish to select the appropriate proportion of men and women, of individuals in different age categories or some other sub-group of the target population. If so, you might have the following type of stratification.

Total target population: 100
Number of men: 60. Number of women: 40.

Instead of selecting alternative names, the sample population could be selected on the basis of every second man and every second woman, and so 30 men and 20 women would be selected.

If you wanted to find out how many men and women had German measles before the age of 10, you could take the process one step further, as follows:

	Men	*Women*	*Total*
Had German measles before age of 10	10	6	16
Did not have German measles before age of 10	20	14	34
Total	30	20	50

If sex and German measles were particularly important, then the sub-groups would be specified as part of the research design, and the sample would be drawn in the appropriate proportion from each sub-group or cell. This is a rather crude example, but, for a small-scale exercise it will generally be an acceptable way of selecting a sample. If a more scientific approach is required for your project, you will need to read further and to acquire a certain amount of statistical expertise.

Further reading on sampling is indicated at the end of the chapter.

Piloting the questionnaire



All data-gathering instruments should be piloted to test how long it takes recipients to complete them, to check that all questions and instructions are clear and to enable you to remove any items which do not yield usable data. There is a temptation in a small study to go straight to the distribution stage, but however pressed for time you are, do your best to give the questionnaire a trial run, even if you have to press-gang members of your family or friends. Ideally, it should be tried out on a group similar to the one that will form the population of your study, but if that is not possible, make do with whoever you can get. Respondents will tell you how long it took to complete the questionnaire, and if they leave any questions unanswered, you will be able to find out why. The purpose of a pilot exercise is to get the bugs out of the instrument so that respondents in your main study will experience no difficulties in completing it. It also enables you to carry out a preliminary analysis to see whether the wording and format of questions will present any difficulties when the main data are analysed.

Ask your volunteers the following questions:

1 How long did it take you to complete?
2 Were the instructions clear?
3 Were any of the questions unclear or ambiguous? If so, will you say which and why?
4 Did you object to answering any of the questions?

5 In your opinion, has any major topic been omitted?
6 Was the layout of the questionnaire clear/attractive?
7 Any comments?

Their responses will enable you to review the questionnaire ready for the main distribution. It will take you some time to achieve a good standard of design and presentation, but if the preparation is sound, it will save you hours and even weeks of work at the analysis stage.

Distribution and return of questionnaires

REMEMBER that under no circumstances can you distribute your questionnaires until you have obtained clearance to proceed from your supervisor, your institution's research committee, ethics committee and any other committee which has responsibility for scrutinizing students' topics, project plans and proposed methods of collecting data. In my view, written committee approval should always be obtained, so never assume it will be 'all right' and that verbal agreement given over a cup of coffee will suffice. It might, but it might not. You need to be sure of your own position. Once you have the necessary approval, you will need to decide how to distribute your questionnaire and what to do about non-response.

There are distinct advantages in being able to give questionnaires to respondents personally. You can explain the purpose of the study, and in some cases questionnaires can be completed on the spot. You are likely to get better cooperation if you can establish personal contact, but if that is impossible, you will need to investigate other ways of distribution. Permission can sometimes be obtained to distribute through internal mailing systems. Colleagues and friends may be persuaded to lend a hand. If all else fails, you may have to mail copies, but postal surveys are expensive and response rates are generally low, so you would only wish to resort to distribution by post if you found it impossible to contact subjects by any other means.

As I mentioned in Chapter 3, even if you will be meeting respondents face to face, it's my view that they should be

provided with a written statement about *their* rights and *your* responsibilities and the purpose of the research. Make it clear that official approval has been given and say what will be done with the completed questionnaires. Who will see them? Will they be shredded when you have finished with them or when your report has been examined? Or will they be kept in your filing cabinet for years in case they come in handy? If confidentiality and anonymity are guaranteed, make it clear what you mean by both. Look back at Chapter 3 if you have doubts. Promise what you know you can honour and nothing more.

If you are not able to distribute your questionnaires face to face, a letter will be required, in addition to your statement. Take care with the wording of your letter. A letter that is too brusque or too ingratiating can have an adverse effect on response, so show your draft letter to a few friends and ask their opinion. Remember to give the return date, either in the letter or in a prominent position on the questionnaire. Experience has shown that it is unwise to allow too long. If no date is specified or if too long is given, it becomes too easy for subjects to put the questionnaire to one side, which often means that it will never be seen again. Two weeks is a reasonable time for completion. Give the precise day and date rather than relying on a polite request for the questionnaire to be returned in two weeks' time. For some reason, it seems to help to jog memories if the day as well as the date is stated.

Include a self-addressed envelope (stamped, if respondents have to return the questionnaire by post).

Non-response

Keep a record of the date questionnaires are distributed and the date they are returned. Generally, there is a good response at first and then returns slow down. Inevitably, they all will not be returned by the specified date but if you do not include any method of identification on the questionnaires, you will have no way of knowing who has replied and who has not and so there can be no follow-up. Non-response is a problem 'because of the likelihood – repeatedly confirmed in practice – that people who do not

return questionnaires differ from those who do' (Moser and Kalton 1971: 267–8). So, if at all possible some effort should be made to encourage more people to return completed questionnaires.

Opinions vary as to the best time to send out follow-up requests, assuming your guarantees of anonymity and confidentiality will allow follow ups, but in a limited-time project you will need to write about a week after the original date if you are to complete data collection in the time allocated. In some large projects a third and even a fourth reminder will be sent, but the number of returns obtained by this process is unlikely to warrant the time and trouble it will involve.

Analysis of data

In an ideal world it would be best to wait for all questionnaires to be returned and to glance through all responses before beginning to code and record. In a limited-time project it may be necessary to begin recording responses as soon as the first questionnaires are returned. The procedures for analysing and presenting results described in Chapter 12, may influence the way you structure the questionnaire and word the questions, so before you decide finally on content and format, read this chapter carefully and make sure you read the checklist to this chapter to be sure you have covered all essential tasks.

Designing and administering questionnaires checklist

1	Make sure you have approval to proceed before you move too far on with your preparation. Never assume it will be 'all right'.	Check the requirements of your ethics, research and any other committees which have responsibility for approving research in your institution. Remember that approval may take some time so if you possibly can, submit your research proposals in good time.

2	Decide what you need to know and list all items about which information is required. Ask yourself why you need this information.	Don't clog up your questionnaire with irrelevant items in case they might come in handy. They won't.
3	Is a questionnaire the best way of obtaining the information?	Consider what information you need. If another method of data collecting is likely to be better, consider the alternatives.
4	If you decide a questionnaire will be best, begin to word questions. Write them on separate cards or pieces of paper, to help ordering later on.	Remember that concepts can't be measured, so if you really do need to know about respondents' satisfaction with x or y, think of indicators of satisfaction.
5	Check the wording of each question. Is there any ambiguity, imprecision or assumption? Are you asking respondents to remember things? Will they be able to? Are you asking for knowledge respondents may not have? Any double, leading, presuming, hypothetical or offensive questions?	Keep language simple. Don't use words respondents may not understand (that includes technical language), unless you are dealing with a professional group, all of whom understand your linguistic short cuts.
6	Decide on question type.	Verbal, list, category, ranking, scale, quantity or grid. Each type requires a different analysis (see Chapter 12 for further information about analysis).
7	When you are satisfied that all questions are well worded and of the right type, sort them into order.	It is often better to leave sensitive questions to the end.
8	Write out instructions to be included on the questionnaire.	Respondents must be quite clear about how they are to answer questions (ticks in boxes, circling items, Yes/No?).

9	Consider layout and appearance. Instructions must be clearly presented (perhaps a different font and displayed in a prominent position?). Decide whether you need a right-hand margin for coding.	Consult Chapter 12 about coding and possible ways of analysing responses before you finally decide on the wording, content and structure of your questionnaire.
10	Word-process your questionnaire. A scrappy appearance will not encourage respondents to take it seriously.	If you are fortunate enough to have a skilled typist who will do your word-processing for you, be thankful BUT it is your job to give precise instructions about layout.
11	Decide on your sample.	Try to select a sample which is as close to your final population as possible. If you have to make do with an opportunity sample, say why in your report.
12	Always pilot your questionnaire, no matter how pushed for time you are.	Ideally, it should be sent to people who are similar to your selected sample. However, if that is not possible, ask friends, family or colleagues to help.
13	Try out your methods of analysis. Again, *read Chapter 12 before you decide finally on format*.	Even with five or six completed pilot questionnaires, you will be able to see whether any problems are likely to arise when you analyse the main returns.
14	Make any adjustments to the questionnaire in the light of pilot respondents' comments and your preliminary analysis.	Consider timing. If it took your volunteers too long to complete, decide whether any items might be removed or reworded. Eliminate any items which are not directly related to your topic. Check again that nothing is included merely because it might come in handy at some future stage.

15	Decide how the questionnaire is to be distributed but before you distribute, check that you know what you mean by anonymity and confidentiality – AND that you make your definitions clear to respondents.	By post? Internal mail? By you personally distributing questionnaires face to face with respondents? If you decide on a postal survey, include a stamped addressed envelope. If respondents complete and return the questionnaire, they are doing you a favour so don't ask them to pay for the privilege. Also include a letter and a statement of conditions and guarantees explaining respondents' rights and your responsibilities.
16	Don't forget to say when you would like questionnaires to be returned, if possible. Give the preferred day and date.	Keep a record of when questionnaires were distributed and when returned.
17	Decide what you are going to do about non-respondents before you distribute the questionnaires.	Remember that you will not be able to send out reminders if all responses are guaranteed to be anonymous.
18	Begin to record responses as soon as completed questionnaires are received.	You have no time to wait for stragglers.
19	Do not get involved with complicated statistics unless you know what you are doing.	It is perfectly possible to produce a good report without extensive statistical knowledge, as long as the structure of the questionnaire is well thought out.

Further reading



Most books dealing with research methods will have a chapter on the design of questionnaires and so the only items listed here are standard texts, most of which should be available in libraries. All provide good advice and will provide a sound foundation if you plan to design a questionnaire as part of your investigation.

Bell, J. (2002) 'Questionnaires', Chapter 10 in M. Coleman and A.R.J. Briggs (eds) *Research Methods in Educational Leadership and Management*. London: Paul Chapman Publishing.

Bell, J. and Opie, C. (2002) *Learning from Research: Getting More from your Data*. Maidenhead: Open University Press. Chapters 5.2, 5.3 and 5.4 discuss the planning and preparation involved in the production of the questionnaire carried out by Chan (2000) in his doctoral study of student evaluation of teaching effectiveness. Part 2, incorporating Chapters 2.1–2.6 consider the preparation carried out by Fan (1998) as part of his Master's study of nursing students' perceptions of their nursing education. Both are well worth consulting as examples of the way two very different students approached the task of planning and designing questionnaires.

Blaxter, L., Hughes, C. and Tight, M. (2001) *How to Research*, 2nd edn. Buckingham: Open University Press. Pages 161–6 give useful advice about sampling.

Bowling, A. (2002) *Research Methods in Health: Investigating Health and Health Services*, 2nd edn. Maidenhead: Open University Press. Chapter 7 concentrates on methods of sampling. Chapters 11 and 12 consider aspects of questionnaire design such as planning, piloting, questionnaire layout, the covering letter, order of wording and checking the accuracy of responses. Chapter 14 introduces issues relating to the preparation of quantitative data for coding and analysis, all of which is useful.

Cohen, L., Manion, L. and Morrison, K. (2000) *Research Methods in Education*, 5th edn. London and New York: Routledge Falmer. Chapter 4 (Sampling) and Chapter 5 (Validity and reliability) are well worth consulting.

Laws, S. with Harper, C. and Marcus, R. (2003) *Research for Development: A Practical Guide*. London: Sage. This book deals with sampling (pages 356–75) and questionnaires (pages 306–10).

Moser, C.A. and Kalton, G. (1971) *Survey Methods in Social Investigation*, 2nd edn. London: Heinemann. In particular, see Chapter 4 (Basic ideas of sampling), Chapter 11 (Mail questionnaires) and Chapter 13 (Questionnaires), which deals with general principles of design, question content, question wording, open and pre-coded questions and question order. This book is now more than 30 years old, but it is still one of the best of its kind I have seen. If your library still has a copy, make a point of consulting it.

Oppenheim, A.N. (1992) *Questionnaire Design, Interviewing and Attitude Measurement* (new edition). London: Cassell. Chapters 1, 2 and 3 provide guidance about survey design and Chapters 7, 8 and 9 cover

questionnaire planning, question wording, basic measurement theory – and much more. An excellent book to keep for reference.

Rose, D. and Sullivan, O. (1996) *Introducing Data Analysis for Social Scientists*, 2nd edn. Buckingham: Open University Press. Chapter 3 (Preparing the data) considers operationalization, data preparation, coding for analysis, using 'open' and 'closed' questions and the principles of entering numeric data into a computer. Another very useful book to keep on hand for reference.

Youngman, M.B. (1994) 'Designing and using questionnaires', in N. Bennett, R. Glatter and R. Levačić (eds) (1994) *Improving Educational Management through Research and Consultancy*. London: Paul Chapman Publishing, in association with The Open University. This is a revised version of M.B. Youngman (1982) *Analysing Questionnaires*, Rediguide 12, Guides in Educational Research, University of Nottingham, Rediguides. The author covers the importance of planning, question specification, questionnaire design, distribution and return. This is an excellent chapter and worth keeping as a permanent record and checklist. During his career at the University of Nottingham, Michael Youngman gave generous support to struggling research students, of which I was one. I believe few of us would have survived without him.