4 Quantitative Research Techniques and Conduct

Introduction

As has been discussed in previous chapters, one of the key research paradigms is that of positivism. This earlier discussion has also indicated that those involved in positivist research almost always make use of a deductive research process and their research is most frequently quantitative in nature. In Chapter 3, the overall approach of the use of surveys has been discussed. As this chapter indicated, the most common type of survey used in academic research is the questionnaire survey. The great majority of students involved in preparing and writing a dissertation will be using a quantitative approach. In fact, as noted earlier, a good number of students, when asked what research is, will answer that it is using a questionnaire survey! This chapter focus on the use of various techniques for collecting quantitative data.

Questionnaires

■ Designing questions

By definition, questionnaires make use of questions! However there is a large range of question types – unfortunately not something always recognised by students. How you generate the questions is important, more important than many students recognise. It is probably easy for you to come up with lots of questions to do with your topic, but you need to know that they will actually provide useful data. This, by the

way, does not mean your questions will give you the answers that you expect you should receive, based on your own views, but will yield answers that make sense, are reliable and can be analysed. Can your questions actually be answered, are they ambiguous or are they leading questions? These are some of the points you need to consider and you need to think about before actually putting your questionnaire together.

One way to assist in the questions-creating process is to have your aims and objectives in front of you at all times when you are doing this. You may have an elegantly worded question that you are keen to ask respondents, but you should think: 'Is it relevant in relation to my aims and objectives?' If the answer is 'No', then what is the point of asking it? A defence of 'I thought it was a well written, interesting question' is not acceptable! It will waste the time of your respondents and also may mean that they do not answer questions that really are linked to you aims and objectives!

If your dissertation involves applying a theory and testing hypotheses, it may be the case that you are making use of questions previously used by another researcher. This is an acceptable way to create your questions, providing you acknowledge their source. Many of the questions may work as in the original, but some others may need to be modified for the context of your research. However, if you are conducting new research, or large parts of your research topic require new questions, then you will have to give considerable time and effort to creating these questions. One important way to generate questions is to use the literature on your topic. Your initial reaction to this, could be to think: 'There is not much literature on my topic'. However, as an example, if we assume you are investigating attitudes of visitors to a heritage attraction that, as far as you are aware from your literature survey, has not been studied in an academic way before, you should still be able to find a heritage attraction that is similar and where academic research has been conducted. You could then modify the questions used in the study of the similar attraction for your research context. This is perfectly acceptable, as long as you acknowledge, giving a reference, where you have found the original questions. This also has the advantage that you can compare the responses you gain in your primary research with the original study you used to create your questions.

Your questions can also originate in material that is not academic. For example, the managers of a tourism facility may have conducted their own research. You can 'borrow' their questions, once again providing you acknowledge this. You will then be in a position, similar to that outlined above, to compare your results with those you have borrowed. Yet another source is topical stories/reports in newspapers, on TV, or on-line. I conducted research at Stonehenge in 2004 and some of my questions were based on a report by UK MPs into the 'quality of the visitor experience' there. Let me emphasise that it is essential that you should acknowledge where you questions came from – you are expected to do this anyway when writing your dissertation, but also it indicates that you have read around your topic and whatever you use should add some authority to your overall questionnaire design.

There are a number of software packages that are available to help you design and create your questionnaire – your institution is likely to have a range of these, but if not, or you wish for something your institution does not have, you will probably have to purchase a copy. There are also on-line questionnaire design sites and these may allow you to have a trial run with your question design. One such site, used by several students I have supervised, is SurveyMonkey.

One of the key aspects when constructing a questionnaire is to be aware that although it is made up of several different questions, they should be linked to its main theme. This means when it comes to analysing the questionnaire, it will be possible to gain an overall perspective on what each individual thinks. This will be achieved by comparing all the responses of each one, and should enable you to write 'This individual tends to have the following views…' with a summary of their responses. However, given there are several question on the questionnaire, it will be possible to compare all the answers to one specific question from everyone involved in the survey. This is frequently the way questionnaire research is discussed, taking in turn each question and a summary of its responses, possibly via tables, graphs or a statistical presentation. Combining these two approaches, (all answers given by one respondent and all respondents' answers to one specific question), also means it will be possible to write, something to this effect: 'Despite this individual generally have the following views, in relation to Questions 5 and 7… they agree with the majority of respondents on other questions'.

Closed ended and open-ended questions

The type of questions that are associated particularly with questionnaires are closed-ended questions. Closed-ended questions restrict responses to a limited range of pre-coded categories. A very common type is the simple choice of 'Yes' or 'No'. Such questions are very easy to analyse and the results can easily be presented as, for example, percentages. However, there are types of closed-ended question which are more complex than this. These will have a number of categories from which respondents need to select. Such questions will usually have the possible responses enclosed within a table, figure or box and there should be a space near each possible response category for respondents to put a tick, or indicate by some means what their response is. A key factor when designing closed-ended categories is to ensure that each category is mutually exclusive. This is easy enough when there are only two possible categories such as 'Yes' or 'No', but can be more difficult with several categories. Below is an example of how not to write a question intended to have mutually exclusive categories (see Table 4.1), followed by how the same table should be presented (see Table 4.2). If you want to find out the age of your sample, do not ask respondents to fill in a table such as Table 4.1.

Table 4.1: How not to use mutually exclusive caegories

Please use the table to indicate your birth year:

Before 1940	
Between 1940-50	
Between 1950-60	
Between 1960-70	
Between 1970-80	
Between 1980-90	
Between 1990-2000	

Why is Table 4.1 not easy to complete and therefore analyse? Well consider if you were born in, for example, 1950, or 1980, how should you complete the table? You would need to put a tick in two places. So in these cases, the categories are not mutually exclusive, which is what they have to be. Table 4.2 below indicates how you should present this question.