3
A General Framework for Developing Proposals

3.1 An overall framework

Chapter 2 suggested that the proposal must deal with these main themes:

- what the proposed research is about;
- what it is trying to find out or achieve;

This chapter describes a general framework for developing and organizing research proposals, focusing on the central role of research questions. While this description has organization and structure, this does not mean that developing a proposal does (or should) proceed in the tidy, organized, deductive way that might be inferred from this description. It is possible for a proposal to develop in this way. But it is more likely that its development will be a messy, cyclical process, with hesitations and frustrations, where the researcher cycles backwards and forwards between different issues and different sections, iterating towards a final version. This echoes the process–product distinction noted in Chapter 2. The process is untidy, but the product is (expected to be) neat, well structured and easy to follow.
we can now represent these themes in three general but central questions, which the proposal needs to answer:

- What?
- How?
- Why?

Irrespective of the position a researcher takes on the issues raised in the next chapter, these three general questions are at the heart of the proposal. Together they form an overall framework for its development.

- *What* means what this research is trying to find out (or do, or achieve). Phrased this way, it points directly to research questions, first general and then specific.
- *How* means how the research proposes to answer its questions. Answering the ‘how’ question means dealing with the methods of the research. Methods are seen here as dependent on research questions.
- *Why* means why this research is worth doing. This points to the justification (or significance, or importance, or contribution, or expected outcomes) of the research. It acknowledges that all research requires the investment of considerable time, energy and other resources, and it asks for justification of that investment. It also involves the idea of the proposal (and research) as a coherent argument. To some extent, the argument presented in the proposal should itself answer the question of why the research is worth doing. In addition, as suggested in Chapter 6, there may well be another section in the proposal which addresses explicitly the justification or contribution of the proposed research.

Generally speaking, a good way to proceed in developing a proposal is to work on ‘what’ before ‘how’ (see Section 3.72). Therefore, this chapter concentrates on research questions. Putting the ‘what’ before the ‘how’ means putting questions before methods. Methods are dealt with in Chapter 5.

### 3.2 A hierarchy of concepts

One advantage of planning research in terms of research questions is that it makes explicit the idea of levels of abstraction in research. We can distinguish five levels of concepts and questions, which vary in levels of abstraction, forming an inductive-deductive hierarchy:
research area;
research topic;
general research questions;
specific research questions;
data collection questions.

To say these five things form a hierarchy is to say that they vary systematically in levels of abstraction and generality, and that they need to be connected to each other logically, by induction and deduction, across those levels. The top level is the most general and the most abstract. The bottom level is the most specific and the most concrete.

Thus, from the top down, the research area is more general than research topic, which itself is more general than the general research question(s), which are more general than the specific research questions, which in turn are more general than the data collection questions.

Another way of saying this, and now moving from the bottom up, is that the data collection questions follow on from (or are implied by, or are included in), the specific research questions, which in turn follow on from (or are implied by, or are included in) the general research questions, and so on up the hierarchy.

A benefit of thinking this way, and of organizing research this way, is that it exposes and highlights the links between these different levels of abstraction. It is necessary to have tight logical links between these levels for the research to have internal consistency, coherence and validity. This is what is meant by ‘follow on from’ in the paragraph above. The technical concepts or processes involved here are deduction and induction. We move downwards in the hierarchy by deduction, and upwards by induction. Both processes are governed by logic.

Not all research projects can be organized or planned this way. In particular, those which have a more unfolding design would not fit easily with this well prestructured approach. There are also issues about ‘generalizing’ versus ‘particularizing’ research questions (Maxwell, 1996: 54–5), and the intended emphasis on one of these types of question or the other in a particular study. At the same time, however, many projects do fit well into this approach, and, in any case, this hierarchy of concepts is useful both pedagogically and practically. Not only does thinking in these terms help to organize the developing proposal; it also helps you to communicate clearly about your research, and to write the proposal (and, later on, the dissertation). And if a study emphasizes particularizing question(s), working through these levels of abstraction helps to sharpen its logic and to strengthen its internal validity.

3.3 Research areas and topics

Research areas are usually stated in a few words, and sometimes just one word. Topics similarly are a few words, but usually more than those describing the
research area. The topic falls within the area. It is an aspect, or a part, of the area – a step towards making the general area more specific. It is included in the area, but it is, of course, not the only topic within the area.

Examples of research areas are absenteeism at work, youth culture in high schools, living with Tourette’s syndrome, academic success and failure at university, membership of voluntary organizations, and youth suicide. Four possible research topics within the research area of youth suicide are shown in Table 3.1.

Identifying first the research area, and then the topic within the area, immediately gives a first level of focus to the research, a first narrowing of the possibilities. Of course, any research area includes many topics, so two decisions are involved here: the first is the selection of an area, the second is the selection of a topic within the area. Many times, students have not so much difficulty with the first decision, the area. They know generally what research area they are interested in. Often, they have rather more difficulty with the second decision: with all these possible topics within this area, which should I choose?

A valuable consequence of identifying the research area is that it enables you as the researcher immediately to connect your work to the literature. It defines a body of literature as relevant to this piece of research. Identifying a topic within an area gives still more specific direction to the literature. It enables a more specific body of literature to be identified as centrally relevant to the research.

### 3.4 General and specific research questions

General and specific research questions bring things down to the next level of specificity, further narrowing the focus of the proposed research. The distinction between them is in terms of specificity. General research questions are more general, more abstract, and (usually) are not themselves directly answerable because they are too general. Specific research questions are more specific, detailed and concrete. They are directly answerable because they point directly at the data needed to answer them. This point is elaborated in Section 3.6.

Just as there are many research topics within a research area, so there are many possible general research questions within a research topic. Specific
A general question is normally too broad to be answered directly, too broad to satisfy the empirical criterion (see Section 3.6). Its concepts are too general. It therefore requires logical subdivision into several specific research questions. The general research question is answered indirectly by accumulating and integrating the answers to the corresponding specific research questions. A study may well have more than one general research question. In that case, each will require analysis and subdivision into appropriate specific research questions. Tables 3.2 and 3.3 illustrate this process with the research area of youth suicide.

This distinction is really a matter of common sense, and, in the practical business of planning research, is not difficult to make. And, as already noted, while the description here is presented deductively, it is by no means necessary for things to proceed that way. They may also proceed inductively, and, as is probably most common, by some cyclical and iterative mixture of induction and deduction.
In formal terms, a good way to distinguish general from specific research questions is to apply the empirical criterion (Section 3.6) to each question, as it is developed: is it clear what data will be required to answer this question? If the answer for each question is yes, we can proceed from questions to methods. If the answer is no, one thing probably needed is further specificity. This criterion is also a good check on deciding whether we have reached a set of researchable questions.

At the heart of this discussion is the process of making a general concept more specific by showing its dimensions, aspects, factors, components or indicators. In effect, you are defining a general concept ‘downwards’ towards its data indicators. Of the several terms given (dimensions, aspects, factors, components, indicators), I prefer the term indicators because of its wide applicability across different types of research. It applies in quantitative and qualitative contexts, whereas the terms ‘dimensions’, ‘factors’ and ‘components’ have more quantitative connotations.

A proviso, more likely to be needed in qualitative studies, is that the research may proceed upwards in abstraction from indicators to general concepts, rather than downwards in abstraction from general concepts to indicators. To repeat, the important thing is not which way the research proceeds. You can proceed downwards, using deduction, from general concept to specific concept to indicators, or you can proceed upwards, using induction, from indicators to specific and general concepts. Or deduction and induction can both be used. The important thing is that the finished product as a proposal (and, ultimately, as a piece of research) shows logical connections across the different levels of abstraction.

### 3.5 Data collection questions

At the lowest level in this hierarchy come data collection questions. They are questions at the most specific level.

The reason for separating out data collection questions here is that students sometimes confuse research questions with data collection questions. A research question is a question the research itself is trying to answer. A data collection question is a question which is asked in order to collect data in order to help answer the research question. In that sense, it is more specific still than the research question. In that sense too, more than one data collection question, sometimes several and sometimes many, will be involved in assembling the data necessary to answer one research question.$^2$

What does this hierarchy of concepts mean for proposal development? I have gone into this detailed analysis because it is often a central aspect of the pre-empirical, setting-up stage of the research, and because it shows clearly the differing levels of abstraction. Understanding this hierarchy of concepts is important, but it is unlikely to be applicable, formula-like, in proposal development. As already noted, the question development stage is likely to be
messy, iterative and cyclical, and it can proceed any way at all. But if you are aware of this hierarchy, you can use it to help disentangle and organize the many questions which serious consideration of almost any research area and topic will produce.

3.6 Research questions and data: the empirical criterion

In empirical research, it is necessary that data be linked to concepts, and concepts to data, and that the links between concepts and data be tight, logical and consistent. This idea needs to be applied to our research questions.

Concepts are embedded in research questions. General questions use general concepts, and specific questions use specific concepts. General concepts are typically too general and abstract to be linked directly to data indicators. Rather, they are linked indirectly to data through specific concepts. Translating general concepts down to specific concepts means specifying what the researcher will take to be indicators, in the empirical data, of these concepts.

The idea of the empirical criterion for research questions is that a well developed and well stated research question indicates what data will be necessary to answer it. It is the idea behind the expression that ‘a question well asked is a question half answered’. Ultimately, each research question needs to be phrased at such a level of specificity that we can see what data we will require in order to answer it.

We can routinely apply this empirical criterion to research questions as they are developed. For each question, is it clear what data will be required to answer the question? If the research questions do not give clear indications of the data needed to answer them, we will not know how to proceed in the research when it comes to the data collection and analysis stages.

One common example of this concerns ‘should’ questions, which arise frequently when students are first planning research. It is worth looking at this in some detail, both because it illustrates the point being made in this section, and because it arises frequently. By ‘should’ questions, I mean such questions as:

- Should teachers assess students? Should teachers know the IQ of students? Should teachers use corporal punishment?
- Should nurses wear white uniforms? Should nurses allow patients to participate in care planning (Brink and Wood, 1994: 8)?
- Should managers use democratic or authoritarian leadership styles? Should organizations have a flat structure or a hierarchical structure?

Such questions are complex, not least because they involve (or appear to involve) a value judgement. But, for our purposes in this section, these questions fail the test of the empirical criterion. Thus, for any of these ‘should’
questions, it is not clear what data would be required to answer them. Therefore, they are not researchable or answerable with data, as stated. They are not empirical questions, as they stand, and they need rephrasing if they are to be answered by empirical research.

I am not saying that these value questions are unimportant questions. On the contrary, a strong argument can be made that ‘should’ questions are among the most important type of questions that we need to answer. I am only saying that they are not empirical questions, as phrased, and therefore they need either to be answered using methods which are not empirical, or to be rephrased to make them empirical.

Usually such questions can be rephrased, to make them answerable empirically. There are different ways this can be done. One simple way, which is often helpful, is to rephrase using ‘Does X think that...’ (where X needs to be defined). Thus ‘Should nurses wear white uniforms?’ might become:

- Do nurses think they should wear white uniforms?
- Do hospital administrators think nurses should wear white uniforms?
- Do patients think nurses should wear white uniforms?

And so on. These rephrased questions now start to meet the empirical criterion. Thus the first rephrasing clearly indicates that we will need data from nurses about their views on the wearing of white uniforms. The second shows we will need similar data from hospital administrators; and so on.

To sum up, as you develop your research questions, you should ask, for each question, ‘What data are needed to answer this question?’

### 3.7 Three tactical issues

Chapter 7 deals with some general and specific tactics in developing a proposal. In addition to that discussion, three tactical issues are noted here, because they fit in well with the content of this chapter. They are:

- the importance of the pre-empirical stage of research;
- questions before methods;
- Whether you need hypotheses.

#### 3.7.1 The importance of the pre-empirical stage

The pre-empirical stage of research refers to the issues discussed in this chapter, and also in Chapter 4. I use the term ‘question development’ to describe this stage of the analysis and development of the research questions. In my
opinion, it is just as important as the empirical or methods stage of the research. It is really where things are set up, and it therefore has an important determining influence on what is done later – although, naturally, that influence is more important in prestructured than in unfolding studies. But its importance is not very often stressed in the research methods literature. I think that has been partly because of the preoccupation in the field with methodological issues. Of course, I do not say that these methodological issues are unimportant. Rather, I want to counterbalance them by stressing the importance of the question development and conceptual analysis work required in the pre-empirical stage. A crucial step in this pre-empirical work is the selection and identification of research area and topic. Once these decisions are clear in the research student's mind, a great deal has been achieved.

### 3.7.2 Questions before methods

Questions and methods need to be aligned with each other in a piece of research. This is part of the internal validity of a piece of research, and is more important than ever in social science research today, where quantitative and qualitative methods sit alongside each other, and may be combined in the one study.

In general, the best way to achieve this alignment is to focus first on developing the research questions, and second on methods to answer those questions. ‘In general’ in this sentence means that there are exceptions to this order of events, and that it is not mandatory. But I recommend it because I have found that a common difficulty for research students is to worry about issues of method in advance of getting a clear view of the research questions. Too often, a student wants to ask, too early, ‘How will I do this?’ or ‘Can I use such and such a method?’ Those questions of course have their place. But that place is not so early in the process of planning the research that they come before the substantive issues dealing with what the research is trying to find out.

### 3.7.3 Do I need hypotheses in my proposal?

On a much more specific level, I single out the question ‘Do I need hypotheses?’ because I find it comes up frequently, and causes confusion. In a nutshell, I believe that hypotheses should be used in research as and when appropriate, rather than in some mandatory or automatic way. This belief is based on the view that hypotheses have an important function in research when they can be deduced from a theory, or when they are explained by a theory, so that the research, in testing the hypotheses, is really testing the theory behind the hypotheses.

This is the ‘classical’ or traditional hypothetico-deductive model of research, and it has its place and its importance. But not all social research does or should align itself with this model. There are two straightforward questions which can help in determining whether hypotheses are appropriate in a particular study:
For each specific research question, can I predict (in advance of the empirical research – that is, in advance of getting and analysing the data) what I am likely to find?

If so, is the basis for that prediction a rationale, some set of propositions, a ‘theory’ from which the hypotheses follow, and which ‘explains’ the hypotheses?

If the answer to these two questions is ‘yes’, I should by all means formulate and test hypotheses in the research, and, in so doing, test the theory. If not, I suggest we leave the matter at the level of research questions. I can see no logical difference between answering research questions and testing hypotheses, when it comes to what data we will get and how we will analyse them. The same operations are required.

This question (Hypotheses or no hypotheses?) does not have to be a strict either–or matter. The idea of the ‘guiding hypothesis’ is often useful in research. This may be an informed guess or hunch, for which the researcher does not yet have a fully developed rationale as described above. As well as bringing together, summarizing and integrating the researcher’s thinking on the topic, which is valuable, such a guiding hypothesis can also give structure to the design, data collection and data analysis aspects of the study, and can expose other concepts in the researcher’s thinking. In that sense, it is useful. But we should remember that research questions can do these functions as well. In particular, the sometimes noted ‘focusing’ function of a hypothesis is just as well fulfilled by a research question.

In short, I am against the idea that we should have hypotheses in research proposals just for the sake of having hypotheses. Let us use them if appropriate, and not use them if not appropriate. Figure 2.1 showed a model of research built around research questions. This model can be modified for research which sets out to test hypotheses. The modified model is shown in Figure 3.1.

Figure 3.1  Simplified model of research (with hypotheses)
3.8 Review concepts and questions

Concepts

- research area
- research topic
- general research question(s)
- specific research question(s)
- data collection questions
- empirical criterion
- hypotheses – relationship to theor

Questions

At the most general level:

*What*
- What is my research about?
- What is its purpose?
- What is it trying to find out or achieve?
- Especially: What questions is it trying to answer?

*How*
- How will my research answer its questions?

*Why*
- Why is this research worth doing?

More specifically:
- What is my research area? Have I clearly identified it?
- What is my topic? Have I clearly identified it and shown how it fits within the research area?
- What are my general research questions?
- What are my specific research questions?
- Does each specific research question meet the empirical criterion? Is it clear what data are required to answer each question?