HOW TO DO YOUR RESEARCH PROJECT

A GUIDE FOR STUDENTS IN EDUCATION AND APPLIED-social-sciences

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SAGE
Your introduction says why you have chosen to do your research project in this area. In it, you explain what you want to inquire into and why you want to do it, and you justify your research question. This chapter considers:

- what takes you to this research area? Is it personal interest? Or is it your reading of the literature, which makes you feel that there are unanswered questions, uncertainty or ambiguity?
- getting your research question right—this is the foundation stone for the whole project. Different kinds of questions will lead you to different kinds of projects.
- what sort of evidence will you seek to answer your research question?
How to do Your Research Project

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Question: Where do I begin? Answer: Begin at the beginning, with an introduction

‘Begin at the beginning,’ the King said gravely, ‘and go on till you come to the end; then stop.’ (Alice in Wonderland)

The King of Hearts’ advice to Alice is wise not just for Alice, but for any storyteller. And your research project is like a story. Like a story, it has to hang together, so it needs to have a beginning, a middle and an end. So, as the beginning, your introduction is especially important: it needs to set the scene and outline the case for the whole project. While it is relatively short (just a few pages usually), it is vitally important for it sets the tone for the whole write-up of your project. It is probably the part that the people who read and mark your work will read most thoroughly for they will be looking for the rationale behind the project. As they read it they will be imagining you doing your research and asking:

- Was this project worth doing? In other words, how well is the case made for research into this issue?
- Has the author (that is to say, you) thought seriously about the questions at the centre of the project – whether they are answerable?

The introduction is a scene-setter, rather like the illustration from Alice in Wonderland. It tells the reader in summary what is likely to be coming and, if it is good, manages to knit together elements of the story to whet the reader’s interest.

Your introduction has to do a number of things.

- It has to introduce the reader to your thinking behind the project: what interested you, and what made you think that your topic was worth researching into?
- It has to outline the purpose: Pure curiosity? Evaluating something? Developing your practice?
- It has to translate your thinking, your interests and your purposes into research questions.
- And it has to summarise the ways that you are likely to go about finding evidence and answering these questions.

However, your introduction is not a summary of the whole project. Students often make the mistake of limiting their introduction to a list: ‘Chapter 1 is about … Chapter 2 is about … Chapter 3 is about …, etc.’ Leave this kind of summary for
Your Introduction: Starting Points

the abstract (see pp. 288–9). Instead of this, the introduction should be the beginning of a story: it should capture the reader's interest. Most of all, it should say why you are doing it.

Doing the BIS

Here in the introduction you have to communicate to the reader (that is to say, your marker) why you think this is a good topic to research. What is the problem you are trying to solve? There has to be a problem there, or at least an issue – something that needs to be found out – which your research promises throw light on. In other words, why are you doing this research? Your research should not simply launch off into some exploration without a reason for that exploration. There has to be, as Booth et al. (2003: 228) put it, ‘some condition of incomplete knowledge or understanding’ which you are promising in your research project to throw light on. You must let the reader know what this condition of incomplete knowledge or understanding is.

Maybe it’s only going to be a little bit of light, a chink, but it is light nonetheless – and more important than the amount of light you manage to throw is the relationship of this light to some issue, problem or dilemma. You have to make it clear what this issue, problem or dilemma is. Not making this clear is one of the commonest weaknesses in both undergraduate and postgraduate research. If you don’t make it clear, the reader is quite justified in asking ‘So what? What is the point of the research?’ Indeed, this is one of the commonest weaknesses in professionally done research as well: when I was the editor of an education research journal I would ask myself, when reading an article that had been submitted, ‘Why is this research being done?’ If the author didn’t make that clear, the article did not stand much chance of being accepted. However experienced or inexperienced, a researcher always has to be able to answer the question, ‘Why should anyone care?’

I like to frame the answer to the ‘Who cares?’ question in a mnemonic that captures the relationship between what it is that needs to be explained and the explanation that will hopefully be forthcoming from your research: it’s about doing the BIS – about the relationship between the background, the issue, and the promised solution. The BIS is the core of your introduction.

Can you state the ‘BIS’ in your introduction?

- Background (the general area which gives rise to the issue)
- Issue (or problem, or question)
- Solution (you promise to throw some light on the issue through your research)
Let’s look at this in a little more detail. The background will contain some common ground on which everyone can agree; it’s the context within which your issue is seated. The issue or ‘angle’ contains two parts: (i) some missing evidence or contradictory reasoning or some paradox or dilemma in the existing literature; and (ii) the consequences of not being able to resolve this lack of information or this dilemma. The solution concerns your promise of elucidation. (See Figure 1.1.)

I give an example of the BIS in Table 1.1. It’s from a research project that I undertook for the children’s charity Barnardo’s (Thomas et al., 1998). The case to be studied was of one special school closing and moving all of its staff and students to continue in the local secondary and primary schools. Politicians and educators mainly agreed that moves such as these were to be welcomed. The issue, though, which the research promised to address was ‘How did the move to inclusion actually have an impact upon the affected children?’

You will notice in this discussion of the background and the issue that consideration of these comes before deliberation about the methods to be used in the research. A common mistake made by inexperienced researchers is to do this the other way round – to think first about methods, almost before they have thought about the issue to be addressed by the research. They will say ‘I want to do a questionnaire’ or ‘I want to do a piece of qualitative research’ before they have even worked out the principal focus of the
research. Doing this is, as the illustration suggests, like putting the cart before the horse. Always let the issue and your research questions take centre-stage, for, as we shall see in Chapter 5, different kinds of issue will lead to different approaches and different methods.

Table 1.1 The BIS in practice

<table>
<thead>
<tr>
<th>Background ...</th>
<th>Inclusion of children with special needs into mainstream schools is happening increasingly. The move to inclusion, backed by anti-discrimination legislation, is occurring principally in response to concerns over the loss of social and educational opportunities for those who are segregated in special schools ...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issue, problem or 'angle' stated ...</td>
<td>While the push to inclusion means that more children are being included in mainstream schools, little is known about the experiences of students who make this transfer to the mainstream from special schools. Concerns have been expressed about (a) the ability of mainstream teachers adequately to meet the needs of young people with serious difficulties, and (b) the readiness of mainstream students to help accommodate special school students ...</td>
</tr>
<tr>
<td>What's missing from the available information?</td>
<td>Much comparative research has been undertaken [brief outline of what it is prior to full explanation in the literature review] but little work has been undertaken to examine the quality and ‘texture’ of students’ experiences in the new environment and how this changes over time – improving or deteriorating – as the process of inclusion becomes ‘bedded in’ ...</td>
</tr>
<tr>
<td>What are the consequences of not having this information?</td>
<td>Without information on these issues the policy to include children with special needs risks failure in practice ...</td>
</tr>
<tr>
<td>Solution, or response ...</td>
<td>A case study focusing intensively on the experiences of the students of a recently closed special school promises to add to knowledge about students’ social and educational adaptation over time, and will offer insight into the means by which such closures are effected.</td>
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**Thinking of a research idea**

Once you know that a research project is part of the expectation for your course, you have to think of an idea for it – the ‘issue’ or problem that I have just spoken about; the ‘I’ of the BIS – and this can be one of the hardest parts. The right idea can lead to a good project, and the wrong idea will almost certainly lead to a poor project.

A research project begins with your curiosity – with an issue or an uncertainty, and this issue or uncertainty is reframed into the research question (which we shall come to in a moment). You may want to know whether something is the case,
or why it is the case. You may want to know what the consequences are of doing something. Your interest may stem from personal experience, from a discussion with a friend or colleague, from a lecturer’s comment in a lecture, or from having read an article in the newspaper. There may be an ‘angle’ that needs investigating: you may, for example, want to resolve an apparent discrepancy between your own observation of the world and the situation that is reported by others. But whatever the inspiration, you should feel curious; you should feel that you want to know the answer.

Remember, though, that you are not out to prove something or to demonstrate that something is the case. Rather, you are looking to find the answer to a genuine question. It’s a great privilege being able to research into a question of this kind with the guidance of a university tutor, and as you progress toward the end of your project you will realise that there is great satisfaction that comes from the analysis of your findings.

**Purposes of research**

Of course, the purpose of your research is to fulfil the requirements of your degree, but let’s put that aside for a moment. Why are you doing it? The idea that you have for your research (if you have one yet) does not exist in a vacuum. It exists as part of your curiosity, and your curiosity in turn depends on your own circumstances. Your circumstances affect the purposes of your research. They may mean that you want to:

- **Find something out for its own sake.** Here you may just have an idea that you want to pursue. It is not related to anything other than your own curiosity. For example, you may have relatives who work in a social services department who may have mentioned disapprovingly how young and inexperienced in life all the social workers seem to be nowadays. This may lead you to look at (a) whether the perception is correct by examining the age profiles of social workers over the last 20 years, and (b) the possible reasons and potential consequences of any changes that seem to be occurring.

- **Evaluate something.** Here, there may be a programme or an innovation that is being introduced or that has already been introduced, and you want to see what its impact has been. What are its outcomes? In short, ‘Did x work?’ For example, an ‘Active Kids’ programme may have been started by a supermarket

Other words for a project are thesis and dissertation. They all mean more or less the same, though ‘thesis’ usually applies to a longer piece of work.
chain, with the provision of extra sports and PE equipment for schools if parents collect the supermarket’s vouchers. You may choose to evaluate the project’s take-up in schools local to you. As a follow-on (depending on the length of your project) you may wish to see what the impact has been locally and try to make some assessment of the costs and benefits of schools’ involvement in the programme.

- **Find out if something works.** Here you may be interested in the consequences of bringing in a particular innovation and you may choose systematically to test this. For example, a publisher may have brought out a new series of reading books, which your school has decided to buy. You may choose to look at how effective these are by using them with half of your class while the other half use the existing scheme.

- **Improve your own or others’ practice.** The aim here is to look in detail at your own practice or an element of it to see if it can be improved. Or, in your research, you may be helping others to do this – to examine their own practice. It will involve introducing new ways of working, thinking and talking about events and incidents as they happen, and collecting information about how these changes and this thinking and talking seem to be influencing things. This kind of research is often called ‘action research’. Its main aim is to change practice – for the better.

### Moving on to research questions

When you have thought of an issue which your research will throw light on, and you have decided what kind of purpose your research will meet, you will need to shape your ideas into a more specific question, or set of questions, which will lie at the heart of your research. Different kinds of questions will lead to different kinds of projects. This may sound obvious, but failure to recognise this represents one of the main problems for those beginning to undertake research: too often students get into trouble because they set off with a question that is not right and by the time they realise that this is the case it is too late.

Remember the question asked of the supercomputer in *The Hitch-Hiker’s Guide to the Galaxy:* ‘What’s the answer to the question of Life, the Universe and Everything?’ After seven and a half million years the computer comes up with the answer: forty-two.

‘Forty-two!’ yelled Loonquawl. ‘Is that all you’ve got to show for seven and a half million years’ work?’

*(Continued)*
The questions that educational and social researchers pose and try to answer aren’t simple. And simplistic – that is to say, over-simple – questions lead to silly answers. It’s very important in any inquiry concerned with people, how they behave and interrelate, that we think about the nature of the questions we want to ask.

How, then, do you think of a good question? First you have to understand that there are many kinds of questions, and that these will lead you off into different lines of inquiry and different kinds of research. Some questions have fairly simple answers. For example, if you ask whether there are more men teachers than women teachers, and whether the proportions of each have changed over the years, the answer will be quite easy to discover. However, if you ask a question such as ‘Why do girls tend to do better than boys in literacy?’ an answer – or a route to finding an answer – will not be so readily evident. In fact, to this question several possible answers immediately suggest themselves. It may be that girls’ brains are better ‘hard-wired’ for language. Or the answer may be nothing to do with brains and hard-wiring: it may be because parents, friends and family of baby girls talk more to them than they do to boys. Eventually schools repeat the process. More is expected of girls in the way of language, and so girls get more feedback and training in the way that language is used. They therefore get better at it.

Each of these possible answers to this question comes with a perfectly valid train of reasoning behind it, and you might think that we should be able dispassionately to work out which is correct. But that isn’t possible. It isn’t possible because ...

a these answers aren’t either/or – in other words, it is not one cause or the other. Both may be contributing to the phenomenon of girls’ superior literacy;

b there are measurement issues involved – it may be that girls merely look as though they are better because of the nature of the tests that we use to assess performance;

c we have no definitive way of answering the question – even if (a) and (b) didn’t apply, there is no research design that could be set up which would enable an answer to be given once and for all.
Just because a question is difficult, though, it doesn’t mean that we should not try to answer it, but we should be aware of the difficulties and, possibly, frame different, additional or more tentative questions.

So, if getting the right research question is vital, how can we decide on it? It is first necessary to acknowledge that there are different kinds of questions and it might be helpful to spend a moment categorising them. Broadly speaking, there are four kinds of questions involved in social research, all of them perfectly valid as starting points for a project, but each of them involving different kinds and degrees of complexity and each of them leading to different kinds of inquiry.

Four kinds of question ...

1. What's the situation ...? You’re a business studies student and have noticed the increase in number of ‘assistant’ professions developing in the public services – community support officers in the police force, teaching assistants in schools, healthcare assistants in hospitals. This may lead you to be interested in the growth in the number of these kinds of staff over the last 20 years. It would lead to the first kind of question: What's the situation ...? The actual question may be something like: ‘How have numbers of ancillary professionals grown as a consequence of ideas about workforce reform over the last 20 years?’

2. What's going on here ...? You may be a teaching assistant and note that a group of students in a class persistently flouts the rules and engages in more difficult behaviour than others in the class. Or you may note that one child in the class is always putting up her hand but has no idea what the answer is when the teacher asks her. These are specific instances that emerge from your own observation, and in each case you may ask yourself why this is happening. You want to make an exploration into the issue. This leads then to the question: What's going on here ...? The actual question may be something like: ‘Why does Jade put up her hand when she doesn’t know the answer?’

3. What happens when ...? You’re a teacher and your school plans to introduce a new policy on bullying. You decide to try and see whether it has any effect. This leads to a third kind of question: What happens when ...? The actual question may be something like: ‘What are the consequences of implementing an anti-bullying policy in Tower Hill Primary School?’

4. What is related to what ...? As a student in education and taking a ‘wild’ module in economics, you notice from the latter that there seems to be a relationship between a country’s gross domestic product and the amount it spends on education. Looking further, you see that while the relationship seems to be strong, there are interesting variations that seem to exist in the
amounts spent on different phases of education (nursery, primary, secondary, tertiary and higher education). You decide to explore these relationships further, to see whether there are cultural or historical reasons that might explain them.

Though these four categories may seem similar – they are all questions, after all – in fact they offer very different kinds of starting points and will lead to very different lines of inquiry. And within one study it may be appropriate to ask more than one kind of question, with several lines of inquiry, each intertwining with the others. Let’s look at them in a little more detail.

**Kinds of question – and some nutshell-sized studies and their implications**

**What’s the situation?**

‘How have numbers of ancillary professionals grown as a consequence of workforce reform over the last 20 years?’

Here you are looking to *describe* something that is happening. When you are describing, you are not trying to do anything much more complicated than saying ‘This is the case.’ Nor are you trying to find the *cause* of something – you are not, in other words, trying to see if \( x \) causes \( y \).

But the researcher understands that to say ‘this is the case’, while relatively simple if compared with saying \( x \) causes \( y \), is nevertheless not straightforward. Like an artist or a photographer, you are trying to present a faithful representation of the facts that you find, and this is harder than it seems.

Like an artist, you will be more or less successful at representing the world that you are trying to describe, depending on what you choose to focus on and depending on the techniques you use. The first problem the researcher faces compared with an artist is that, while artists literally try to draw a picture, in research you are making your picture with words or numbers, and we all know (e.g. from the way that politicians present their cases) that words and numbers are unreliable messengers of truth. We select the words and numbers that we use. Also like an artist or a photographer, your portrait will be vulnerable to pressures and prejudices of one kind or another and the picture you paint will be
susceptible to distortion because of this. Artists’ subjects want to look beautiful or handsome, and the subjects of research tend to be the same: they want to look good.

Like an artist or a photographer, you will also be exposed to the risk of things going wrong: a photographer may have the picture go fuzzy or blurred or underexposed, or may have the wrong part of a portrait focused, or may make a beautiful person look ugly. A skilled photographer will know how to avoid these problems. Likewise, the photographer may be able to magnify the relevance of a particular facet of a scene by using a special lens. These kinds of problems and opportunities are possible also when you are using words or pictures, and in the same way that skilled photographers can avoid problems, well-prepared researchers can circumvent the traps that confront them when doing research.

While this represents a simple kind of question, it is perfectly acceptable and valid as a basis – a platform – for an undergraduate or master’s degree and can lead to a first-rate project or dissertation. But description on its own will not be sufficient for a project. You will be expected to make some sort of analysis of the increase in ancillary professionals as well, and this may depend on further reading or on certain kinds of fieldwork – perhaps asking informed people (such as police officers, nurses and teachers) for their opinion on the growth of this group of personnel.

What’s going on here?

‘Why does Jade put up her hand when she doesn’t know the answer?’

How could you answer this question? You can’t climb inside Jade’s head. And asking her why she does it probably will not reveal very much. To try to answer it without recourse to a map of Jade’s mind, you have to use your own knowledge of situations like this, and your own knowledge of people (including your knowledge of yourself) to make informed guesses. All of this is of course subjective, but it is none the worse for this, as long as you realise and acknowledge the boundaries that surround this kind of inquiry – and, as in all research, we must be sure that we do not make inappropriate claims for it. Deciding to judge the situation as a person makes this a particular kind of research: it is about two people – the observed and the observer, and we must be careful not to generalise from this very particular situation to others. You are trying to interpret the situation in order to illuminate what is going on. That is why a study of this kind may be called interpretative or illuminative.
When you are *illuminating*, you are shining a light on something. This implies that the subject currently is in the dark (or at least is badly lit): it’s impossible to see what is going on. (If the sun were shining brightly, there would be no need for illumination – no need for research.) So you shine a light. What does this metaphor mean here?

First, it means that you are expecting to see something that you couldn’t see before. Second, it implies also that you will be able to see because you are looking in a way that you weren’t able to previously. Third, it implies that you are giving time and energy to looking hard (i.e. shining the light) and using *your own self* – your intelligence and experience – to make sense of the subject under study.

There’s nothing ‘unscientific’ about this use of your own self, as some people who prefer more structured research proclaim: the famous mathematician George Pólya (1945/2004: 172) said that all kinds of discovery, in research or elsewhere, are determined by having ‘brains and good luck’ and by ‘sitting tight until you get a bright idea’. In other words, the main part of research is not the cleverness or the specialness of the methods that you use, but rather your willingness to use your own head to look at something intelligently.

Don’t, in other words, ignore your own ability to reflect on a problem, and don’t minimise its significance in helping you to understand the problem. This is the case in all kinds of research, but particularly in illuminative inquiry you will be drawing on your own resources – your own knowledge of people and social situations – to make sense of what you find.

Extending the metaphor about illumination, remember that the object will look different when the light shines from different angles, and will appear different from various viewpoints and to different people. In remembering all of this, you will realise that you are doing something more than describing. In doing this kind of study, your aim will not be simply to describe the facts, because you will be interested in a social situation that is not usefully explicable simply within a framework of description. You will be involved in the kind of study that is about feelings, perceptions and understandings, and to get at these you will need to be listening to people and interpreting what they are saying, observing what they are doing and trying to understand their actions.

**What happens when?**

‘What are the consequences of implementing an anti-bullying policy in Tower Hill Primary School?’
This ‘What happens when?’ question is accompanied by a particular kind of structure. This structure usually involves taking two or more observations or measures (e.g. before and after an imposed change) and then trying to deduce what any difference between those observations or measures may mean. So, in this example, you would need a measure of the amount of bullying that took place before the policy and after the policy to see whether there had been a drop – which you might infer was due to the implementation of the policy. Clearly, the measures that would be taken about the subject under study, namely bullying, could be taken in a multitude of ways, and it is these different forms – and their satisfactoriness – that will be examined in Chapter 5.

Usually in this kind of study you are asking ‘Does this seem to be causing that?’ You are asking questions of the variety: ‘Does x cause y?’

The situations here may have been engineered by you, for example by your setting up an experiment, or they may be naturally occurring situations where you want to examine the influence of one phenomenon on another. Your observations of them may be more or less structured and your inferences more or less particular on the basis of this structuring.

Another example: you may be interested in changing the way that you, as a year tutor in a secondary school, address your Year 8s when you meet them in the morning. You may choose to be in class half an hour early, not take a formal register and instead ask the youngsters to sign in as they arrive. What effects does this seem to have? You will be making deductions about any possible consequences. You could make this observation informally by just watching and taking notes, or in a much more structured way by precisely adjusting the conditions (down to the length of time you are making the change) and also the outcome you are choosing to measure, and comparing the behaviour under the original condition and the new one. You might also compare what happens in a colleague’s class where no such changes are made. Whether your observations are informal or formal, you will be making inferences about the cause and effect.

A particular kind of research design emerges from this sort of question, a design that promises an indication about the causative link. But, just as was the case in the consideration of ‘What’s going on here?’ questions, we have to acknowledge the potential frailty of this kind of inquiry, and we must be sure that we do not make inappropriate claims for it. We’ll discuss some of the things that might go wrong in Chapters 6 and 8.
What is related to what?

I gave earlier an example of the seeking of relationships – what is related to what – in the relationship between a country's gross domestic product and the amount it spends on education. Such relationships could easily be explored by examining official statistics.

These relationships can also be sought in questions that lead to empirical study 'in the field'. For example:

‘What are the relationships between reading attainment, exclusion and non-attendance at Harley Green Comprehensive School?’

This is a question raised by a master's degree student, having noted in the educational press that children designated as having special needs were far more likely to be excluded than other children. Her study involved the collection of data in the school and inspection of school records. My interest in her comment on the press stories centred on the implication in those stories that in some way schools were picking on children with special needs to exclude – that special needs in some way or another 'caused' the exclusion. In fact, what seemed more likely to me was that 'special needs' as a category 'picked up' young people who are failing for a host of reasons, and this generic failure ultimately led to disaffection and exclusion. One did not lead to the other. Rather, the young people in each group were essentially being drawn from the same pool.

This inappropriate attribution of causation highlights the main challenge to the interpretation of a question that seeks relationships of any kind, as I shall discuss further in Chapter 8.

All of these four types of questions lead to their own routes of inquiry and will cause you to lean lightly or heavily toward a particular kind of approach and design for your research. Approach and design are facets of the research process that we shall examine

**Data:** This is a rather confusing word when you first come to social research, since you will probably associate 'data' with numbers. In social research, however, the term 'data' means any source of raw information – 'raw' in the sense that no one has worked on it. So it may indeed be numbers (test scores, say) but it may also be the transcript of an interview, questionnaire responses, photographs, documents, videos, etc. All of these constitute data. By the way, 'data' is a plural noun (it's the plural of 'datum') so whenever you refer to data you should use the plural form, for example 'These data show …' and 'The data support the view that …' (not 'This data shows …', etc.).
In more detail in Chapter 5, but you should be aware at this stage where your initial questions are likely to take you.

**Descriptive or explanatory questions?**

You can probably see from the four kinds of question that I have just outlined that the nature of your question can be more or less complex. At their simplest, questions are descriptive, such as:

- What are the principal means by which students at this university arrive on campus?
- What are some of the main ways in which anti-MRSA measures are being ignored at Gotham General Hospital?
- What are consumers’ most trusted commercial websites?

By contrast, questions which promise some kind of explanation are always going to be more complex. These might be questions such as:

- What factors are determining students’ choices concerning travel to campus?
- Why has there been resistance to anti-MRSA measures being implemented in Gotham General Hospital?
- Are there factors associated with consumers’ trust of commercial websites?

The second set of questions is about more than just description since they more conspicuously seek to offer an explanation of an issue or a problem. Such questions will usually be asked by students who have more time and resources at their disposal – that is to say, those at master’s or doctoral level. For an undergraduate project a question that leads to description is quite acceptable, although those which seek some kind of explanation, if only in conjecture or theorisation in the discussion, will always be looked upon favourably (see ‘theory’ pp. 96–99).

It may be the case that one kind of question will emerge out of another, so that description precedes and explanation follows. Let’s imagine an important issue in applied social science – one that concerns child abuse. Here, the question about child protection may be followed by another one, thus:

- Who are the professionals centrally involved in child protection?

will be followed by:

- Why did these professionals fail to communicate effectively in the case of Baby X?

So, to a question that students often ask, ‘Can I have more than one research question?’, the answer is ‘Yes, though these will need to be related to one another,
and you shouldn’t start off with too many.’ It is best to start with fewer, simpler questions and see what these lead to as your project progresses. Questions that demand description may precede ones that demand explanation.

A research question – or a hypothesis?

You may come across the term hypothesis and it may be suggested to you that your research should be framed around a hypothesis rather than a question. Research in the social sciences is framed less around hypotheses now than it was ten or twenty years ago for several reasons which are too knotty to go into here. However, if your question is of a particular kind it may well be appropriate to structure your research around a hypothesis – especially if you have been encouraged to do this by your tutor. Hypotheses are framed around ‘what happens when … ?’ questions. The difference between a research question and a hypothesis is that the expectation surrounding the hypothesis is that the hypothesis is precisely testable. The emphasis is on ‘precisely’. You have to be able to specify the conditions under which your hypothesis will be tested, and the expectation is that you will be able at the end of your research project to say: ‘Yes, this is the case’ or ‘No, that is not the case.’ (In fact, you can never say these kinds of things definitively in social research, and hypotheses are problematic for this reason.)

But let’s forget about the problems with hypotheses for a moment and assume that we can use them unproblematically. In order to be able to say ‘Yes’ or ‘No’ you have to be able to measure two or more features of a situation precisely and set up experimental conditions that will enable you to test the hypothesis. I’ll explain further how you can test a hypothesis using an experiment in Chapter 6.

Coming up with a question

Your question will emerge from your interests and your observations. If you are having difficulty coming up with a question …

- Think of the situation in which you are working or the subject you are studying. Is there something novel, perplexing or unusual about it? If so, think about how you might look into it further.
- Ask a colleague, friend or relative who works in the field about a particular issue or problem in their working day. How might this lead on to research questions?
- Think of a story in the media about education, the media, healthcare, probation, business or the field in which you are studying. Are there
aspects of it that seem interesting or puzzling? What aspects of it could be followed up?

- Try looking at some websites on the Internet, such as those of the big government departments (Department for Education, Department of Health, etc.). Find out what is topical. School meals? Children’s happiness? How could a project be geared around these topics?

- Look at Emma Smith’s website, www.secondarydataanalysis.com, which gives access to a broad range of UK, US and international data. Scan through some of the data. See if it gives you any ideas.

- Go to the Campbell Collaboration or Cochrane Collaboration websites (see p. 88) for information on important current issues.

If you are still left wondering what to do, try …

- brainstorming (see box). From your brainstorming try to come up with three different research questions, preferably from a situation you know something about.

- doing an A to Z of topics – think of anything at all, and see what it sparks off in your mind. For example:

  A – Adopted children – do they have special difficulties?
  Academies – what do parents think of them?

  B – ‘Black history’ – students’ attitudes.
  Barack Obama’s health policy – contrasts with the UK system.

  C – Criminal justice and the young person.
  Computers in the primary classroom.

  D – Diversity – how well are we doing?
  Diary-keeping by business leaders.

  E – Early years education internationally.
  ‘Every Child Matters’ – how aware are parents of it?

**Brainstorming**: This is a technique that was developed in the advertising industry (but let’s not hold that against it) for helping to produce interesting new ideas. Two or more people get together and say anything that comes into their heads on the topic in question. The ground rules are: (1) quantity (of ideas) rather than quality; (2) no criticism of the ideas of others; (3) unusual ideas are welcome.

**Is it feasible? Problems with research questions**

When you have thought of a question, and have thought about how it maps onto the four types of question I outlined above, consider it against two more important criteria: preciseness and ‘doability’.
Is it precise?

The most common problems with research questions are that they are too broad or too general. “What causes children to have reading difficulties?”, for example, is a question that is almost impossible to answer. However, “What are the characteristics of Sean’s behaviour when he is reading?” is a question that can be answered in a small-scale study. Remember that you have time and material constraints and some questions will not be answerable in the time you have available.

Is the research that will come from this question doable?

Sometimes there will be ethical problems about a research question. For example, if you were interested in how parents’ arguing affected children at school, it would not be ethical to ask children (or parents) about these intimate matters. Or there may be problems of access to the kind of information that you want. If your question would require observation in classrooms, are you sure that any school is going to let you in to observe? These issues of ethics and access are addressed in Chapter 2.

Prima facie questions

Prima facie questions are questions that you start off with – the questions that you state here in your introduction. They change and become refined as your study progresses.

If you feel that your question is not quite right at this stage, don’t worry. It is often the case – no, nearly always the case – that things won’t be sorted out once and for all at the beginning of the study. Actually, I should state it even more strongly than that: it is to be expected that this (or these) will not be your final question(s). Especially in small-scale research of the kind that you are doing, and particularly where there is any kind of practitioner bent to it, it is very likely that you will not be able to specify your questions exactly at the outset.

You may feel that you don’t know enough about the area to make definitive choices at this stage about your questions or your plan of attack on the subject. This is fine. Or you may feel that you wish...
to do some practical groundwork that will in some way set the boundaries for the project, and in some way map out the channels down which your inquiry can run. Your reading of the literature will almost certainly enable you to refine your first questions.

The idea that you have to specify exactly and definitively your course of action at the beginning of your project is something of a hangover from the days when social research aped the methods of the natural sciences, with experiments in which a blueprint of questions, procedures and methods would be drawn up in detail at the outset and followed conscientiously. In fact, it is doubtful whether that is actually the way that natural science researchers ever operated in real life, but it’s what they said they did. As the renowned biologist Sir Peter Medawar put it in debunking this idea of cleanly planned and executed research, the special methods and procedures that are supposed to be associated with scientists’ work represent merely ‘the postures we choose to be seen in when the curtain goes up and the public sees us’ (Medawar, 1982: 88).

But social scientists, having a bit of an inferiority complex about their status as scientists, believed the natural scientists and tried to copy the folklore model of science that had been presented to the public. In the social sciences, though, it is nigh on impossible to set up a project of the kind you will be doing without stopping, rethinking, replanning, changing, starting again. And rethinking your question is the first part of this process of revisiting. It is to be expected, and is a necessary and integral part of the process of a research project such as yours.

All of this replanning and revisiting means that the kind of research that you do in investigating the social world is often called recursive or iterative. In other words, it turns back on itself and starts again, and a distinction is drawn between this pattern – involving reviewing and replanning – and what is sometimes called a ‘linear’ plan (see Figure 1.2).

So the idea that things won’t go to plan is itself planned for. If the ‘recursive’ part of Figure 1.2 looks a bit of a mess, that’s because that’s what social research is often like. Your research in fact may follow an entirely different or simpler path, but most
likely it won’t be a straight, blinkered path from beginning to end. Importantly, your reading for your literature review will inform your question and help you to refine it. Beyond this, you will see things to the side of the path; you will notice something over there and decide that that is more interesting than the original topic; you will find that you can’t talk to the people to whom you wanted to talk, and so on. What you discover and the way that the world treats you will always influence the way that you proceed: it’s like a game of snakes and ladders – you’ll get knock-backs and sudden boosts and insights. And both knock-backs and insights will make you do a lot of rethinking.

For this reason, the question or questions that you have at the beginning of your study are called *prima facie questions*. Prima facie means ‘on its first appearance’ or ‘at first sight’, so calling your questions *prima facie* is an acknowledgement of their status – an acknowledgement that they are tentative and will change. We will look at how you will revise your prima facie questions in Chapter 4.

**Kinds of evidence and kinds of answer**

I’ve concentrated so far on questions. When we want to answer a question we are going to have to rely on *evidence* of some kind, and it is worth at this stage thinking about the kinds of evidence that might help to answer particular kinds of questions. We talk of evidence being of varying kinds: strong, weak, circumstantial, primary, secondary, etc., but what do these mean and how are they likely to be related to your thesis? This is important to think about at this stage, since the assessment of your thesis by your marker will depend on your collection of evidence. If you have a question that leads to weak evidence, you will be marked down heavily for it. This is a good reason to get the question right at the outset.

Let’s look at the simple questions given in Table 1.2 – none of them anything to do with education or social science – just to see what kinds of evidence might emerge and why you should be very careful at this stage.

Already from Table 1.2 you’ll note several processes – you may be looking up facts in books or already published research. Or you may be collecting your own evidence ‘out there’ in the field: you may be asking people who are directly involved, or you may be making an observation, or trying something out to see what happens. What you get from each of these processes are different kinds of evidence, each kind acceptable. However, each has its own strengths and weaknesses and its own potential pitfalls, as you will have noticed from the examples.

Usually (but not always), there will be an expectation that the kind of evidence you collect during a research project you undertake at university will be *empirical*. That is to say, you will be expected to go out into the wide world and
### Table 1.2 Questions and evidence

<table>
<thead>
<tr>
<th>Question</th>
<th>Ways of answering it with evidence</th>
<th>Is the evidence reliable and robust? (Stars out of 5)</th>
<th>Why the star rating?</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many colours are there in the rainbow?</td>
<td>Look it up in a book.</td>
<td>★★★★</td>
<td>The book is almost sure to be right. However, books aren’t always right. There’s always room for interpretation (e.g. what do you mean by ‘colour’? Does ultraviolet count?).</td>
</tr>
<tr>
<td></td>
<td>Wait for the next rainbow and count the colours.</td>
<td>★★★★</td>
<td>It’s good to rely on your own observations rather than someone else’s (e.g. in a book). However, be aware that your answer may not agree with another person’s – because, in the case of this example, you may disagree on what constitutes one colour (where do yellow and blue become fused, and does the merging constitute a separate colour?).</td>
</tr>
<tr>
<td></td>
<td>Ask someone else.</td>
<td>★★★</td>
<td>They may know; they may not. They may not know, but not want to tell you that they don’t know – and make something up.</td>
</tr>
<tr>
<td>What is my best friend’s middle name?</td>
<td>Ask her/him.</td>
<td>★★★★</td>
<td>You’d think this should be pretty accurate. But what if your best friend is ashamed of their name? Might they claim not to have one, or make up a different one?</td>
</tr>
<tr>
<td>What is the meaning of life?</td>
<td>Reflect on it yourself, or ask others. Read books.</td>
<td>★</td>
<td>No clear answer (ever, no matter how much research you do).</td>
</tr>
<tr>
<td>How can I get to Edinburgh from here?</td>
<td>Look it up on a map, or go on the Internet.</td>
<td>★★★★</td>
<td>The chances of a published map being wrong in directions of this simplicity are vanishingly small.</td>
</tr>
<tr>
<td>How many legs does a millipede have?</td>
<td>Look it up – e.g. a book, or via an Internet search.</td>
<td>★★</td>
<td>Doing an Internet search reveals a suspiciously similar range of answers, giving ‘between 80 and 400’ rather too often for my liking, revealing that ‘authorities’ may just rely on each other rather than find out for themselves (see the danger of secondary sources, p. 58).</td>
</tr>
<tr>
<td></td>
<td>Dig up some earth, find one and count.</td>
<td>★★</td>
<td>There’s a good chance you’ll lose count or in some way be inaccurate. And if you decide to check by counting the legs of another millipede and you come up with a different number you are into further questions about the possibility of different species or variation within one species.</td>
</tr>
<tr>
<td>What does this button do?</td>
<td>Press it.</td>
<td>★★★★</td>
<td>You should be able to see what the button does when you press it, but it may be the case that nothing happens (imagine a car dashboard, or a microwave oven control panel). However, if something observable does happen you can be fairly sure that the button did it. (But not absolutely sure – it might have been coincidence of some kind.)</td>
</tr>
</tbody>
</table>
collect data yourself rather than relying on information marshalled by others – for example in a book. (In fact, a research project as a literature review – that is, just as a literature review – is sometimes acceptable, but if you want to do a research project that is based solely on the literature you should check with your tutor.)

Because of the potential frailties and weaknesses of one kind or another in evidence, it is useful to gather it in different ways, so that one piece of evidence supports another. When the police gather evidence at a crime scene they talk about corroborative evidence when one piece of evidence supports another piece. One piece of evidence on its own is often taken to be not enough, since mistakes can be made by witnesses or police officers; equipment may be faulty; witnesses may not understand what has been asked of them, or may be making something up for any of a host of reasons. So, if Mr Dorrit says that he saw his neighbour Mrs Nickleby go into her house at 10.30, he may be believed, but this on its own will not be taken to be satisfactory, for he could have been mistaken about the time, or may have confused Mrs Nickleby for someone else. But if another witness, independent of Mr Dorrit, says the same thing, you become surer about the fact that Mrs Nickleby indeed entered the house at that time. And if the video camera across the road catches a good likeness of Mrs Nickleby, timed 10.31, we’re almost home and dry.

The same kind of thing applies in a social research project. It is much better to rely on several kinds of evidence rather than just one. There are many ways in which evidence can be sourced: from

- personal experience
- the testimony of others
- documents or archives
- artefacts
- observation

and so on. In social research, using more than one kind of evidence is sometimes called triangulation (see p. 145). Having noted the importance of corroboration (or triangulation), though, it is important to say that you will never in social

**Empirical**: Strictly speaking this means something that has been found out from experience, from trial and error or from the evidence of your senses. 'Empirical' is often wrongly used, though, with the intimation of experiment of some kind, so when people talk of ‘empirical evidence’ they usually (incorrectly) mean evidence coming from some kind of trial or experimental study.
research get conclusive evidence of something being the case. However, the more evidence there is – each piece corroborating the other – the surer you will be. This is why the noun ‘evidence’ is so often qualified with adjectives – prima facie evidence, inconclusive evidence, weak evidence, strong evidence, conclusive evidence, and so on.

I have spoken about these issues of evidence in general, but it is important to think about them in particular in relation to the social sciences and your own thesis. Will you be able to collect evidence that will enable you to answer your question? Think about the evidence you are likely to collect when you answer a question. Suppose your question were something to do with the problems children have with maths. What kind of evidence could you collect? You could:

- Ask the teacher directly about the problems.
- Ask children what their problems are.
- Get children to talk to you while they are doing a problem.
- Get children to complete diagnostic tests.

All of these would garner evidence of some kind, and each would have its own strengths and weaknesses.

A final word about evidence: it is the way that you view, scrutinise and use evidence that is important. It is a matter always of looking at evidence, thinking about it critically and assessing it. The great philosopher John Dewey (1920/2004), in reviewing several kinds of thinking, argued that it is only ‘reflective thought … [that] is truly educative in value’ (p. 3). He distinguished this reflective thought, where there is a deliberate self-questioning about the grounds for a belief, from other kinds of thought where there is slight or no acknowledgement of the strength of the evidence or grounds on which it is held. He proceeded:

[Some thoughts] are picked up – we know not how. From obscure sources and by unnoticed channels they insinuate themselves into acceptance and become unconsciously a part of our mental furniture. Tradition, instruction, imitation – all of which depend upon authority in some form, or appeal to our own advantage, or fall in with a strong passion – are responsible for them. Such thoughts are prejudices, that is, prejudgments, not judgments proper that rest upon a survey of evidence. (pp. 4–5)

Dewey makes the important point here that we should be suspicious of certain kinds of thinking, particularly those arising from tradition and authority. We should think for ourselves. And we should be wary of any line of reasoning (in others or in ourselves) that comes from
a vested interest or a strongly held opinion (a ‘passion’). The reflective thought that he favours is about being sceptical about our thoughts and about always looking for evidence for a line of reasoning. He suggests that we should try to be almost instinctively critical. Such reflective thought is the hallmark of a good research project.

A title

You may want to have a precise title for your thesis right from the start, and while this may seem like good planning, in fact this is one place (that is to say, the beginning) where it is probably good to be a little imprecise. In fact it is more important to be thinking about your question than your title. This isn’t to say that a title is unimportant. It is important. It is vitally important, because your work will be assessed by reference to your title – in other words, the examiners will ask themselves ‘Does this thesis address the title?’

But when you are doing a project in the social sciences, large or small, you will realise that the world isn’t quite as you thought it was going to be. You can’t get access to this place, there are ethical problems there, or better questions occur to you as you begin to read about the issue. (These changes will be addressed in Chapter 4.) The important fact to realise is that these changes will inevitably occur and that if you stick rigidly to a premeditated title you will be missing many opportunities to make your project more interesting or more manageable.

Or you might take notice of the necessary changes, but still stick unthinkingly to the title even though the project has changed substantially in practice. After all, you know what you are doing, and as your research gathers momentum the title may slip to a cobwebby corner of your reptile brain, never to be re-examined. But remember that while your tutors are reading your project they will be asking themselves if it is addressing the title. So if you have a title that doesn’t match up to what is actually in the write-up of your project the marker will be disappointed and wonder why. One of the commonest causes of low marks is when a piece of work – essay or project – doesn’t match the title.

So the best plan is to have a working title – something that captures what you originally set out to do – which you can then change once you have finished the dissertation. It may just need a tweak or perhaps a substantial modification. But the new title – the one you decide on after you have finished – will match the completed product exactly. Always use the working title, though, to remind yourself of what you set out to do, because you will always find when you are doing research that you will be tempted to follow a hundred different paths. It might be worth following one of them, but do you really want to? Always examine your motives for potential change and your likely outcomes. This is where the storyboard in Figure 3.1 (p. 65) will help. It will help you to decide which are the likely main routes that will emerge from your working title and what avenues of investigation may be opened up by each main route.
What research is – and what it isn’t

It is worth closing this chapter with a word about what research is and what it isn’t. Research is about curiosity and inquiry, as for example journalism is. However, it differs from journalism in that it is governed by a number of expectations. There is the expectation that research will:

- aim to find new knowledge
- be thorough
- be balanced
- be fair
- be ethical.

These are some ground rules, and we’ll look at them in more detail in later chapters. But it is worth reinforcing the fact that research is not journalism and it is not about campaigning for an issue. It’s not about being committed to a position. Nor is it about ‘knowing’ something and trying to find ‘proof’ for it. You cannot assume that you already know the answer.

Research is about disciplined, balanced inquiry, conducted in a critical spirit.

Overview

Your introduction is important: it sets the scene for the reader. It should interest readers and make them want to read further. It tells them why you are interested in an area and why you think it is worth researching. It outlines what your first research questions are. You should have taken time thinking about the kinds of questions you will ask because your whole project will be geared around the way that they are constructed and the kinds of evidence you will need to address them. As you think about your questions, you should consider their nature and the likely paths of inquiry down which they will lead you. But you shouldn’t become paralysed with fear about these early questions. At this stage they are prima facie questions – questions that will be refined as you undertake preliminary work and as you do your literature review. They are working questions, in the same way that your title at this stage is a working title.

In fact, the whole of your introduction is really a working document, to be revised as your work progresses. It should not, however, attempt to airbrush out difficult aspects of your journey or places where you have decided to change direction. These are all part of your story. If you say where you started and where you have altered course it will help readers to understand why you went where you did. Do tell them about what you intended to do originally and how things have progressed as you have worked on your project.
## Checklist

You may find it helpful to copy this table and write down the answers to the questions.

<table>
<thead>
<tr>
<th>Have you …</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 … done the BIS?</td>
<td></td>
</tr>
</tbody>
</table>
  - considered the **background**?  
  - thought about the **issue or problem** you specifically want to address?  
  - reflected on the kind of **solution** that may be forthcoming – the kind of research that will address your issue? | Write a sentence or two on the background  
Outline the specific problem in a sentence or two  
Don’t write anything down yet – just think about it at this stage. You can be more definite only after considering different research approaches and methods (Chapter 5) |
| 2 … thought about your purpose in doing your research? | Write down a couple of sentences |
| 3 … had an idea to focus on? | Say how your issue or problem (above) translates into an idea for research |
| 4 … got a **prima facie** question? | Write this down. Remember that it will change as you read around the area (see Chapter 4) |
| 5 … thought of a working title? | Keep it short |

## Further reading

More for advanced students than undergraduates. Really gets you to think about research and what it is you are trying to do. A nice antidote to recipe-driven research.  

This excellent book is about research right across the spectrum, from the sciences to the humanities, and gets its readers to examine the relationship of research question to research approach.

Focused particularly on development work, Chapter 5 is good on research questions and focus.

Written less as a manual and more as a story or a series of anecdotes about supervising research, this is an unusual book. Luker interestingly and very helpfully teases out the problems students experience in formulating a problem to be solved in their research. She does this by distinguishing between the ‘explanandum’ (the thing being explained) and the ‘explanans’ (the explaining thing) – which is rather like my BIS, above, but more fully and technically covered.

This provides a technical discussion of what research is – for the advanced student.

A compilation looking especially at evidence and evidence-based policy and practice in medicine as well as in education. See Chapter 1 for my discussion of evidence, what it is and how it is used.

This contains some good discussion and advice on evidence.

This book concentrates, as the title suggests, on the research question in social science, its importance and how it can be developed.