

# 2

## The FraIM: Frameworks for an Integrated Methodology

### This chapter will:

- introduce a number of selected issues about designing and planning your research
- describe and discuss the main stages in the FraIM
- provide examples of how to integrate data source management, methods of data collection and types of data used in research
- enable you to apply the FraIM to your own intended research.

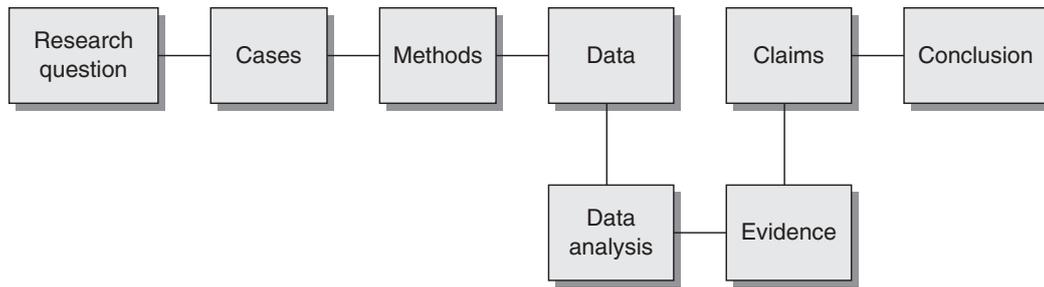
### Introduction

This chapter explains how the FraIM will help you structure your thinking about research and consequently enable you to integrate different approaches to each stage of the process.

The *Oxford Dictionary of English* defines a framework as ‘a basic structure that underlies a system, concept or text’ (Soanes and Stevenson, 2005: 685). The word ‘framework’ is often used as a synonym for ‘model’. The basic model or framework that is proposed in this book for carrying out research is presented in Figure 2.1.

Similar structures or models can be found in, for example, Hammersley who distinguishes the ‘selection of cases from at least four other aspects of research design: problem formulation; data collection; data analysis; and reporting the findings’ (1992: 184). Punch (2009) draws on a simplified model of research which consists of:

- the *pre-empirical stage*: research area; topic; questions
- the *empirical stage*: design; data collection; data analysis; answer questions.



**Figure 2.1** The basic structure of the FraIM

Punch explains that ‘This view of research ... stresses the central role of research questions, and of systematically using empirical data to answer those questions’ (2009: 10). The basic structure of the FraIM is also relatively straightforward, as with the above examples. It will help you carry out small-scale empirical investigations of educational and social issues. It is referred to as a framework because there is no ‘content’, only structure. This means that, like any model, it represents processes and activities in an abstract and generalised way. An advantage of using this approach is that the framework can be applied to any research project that you might want to undertake. It identifies the salient elements of the process and shows the links between each of the different elements.

The structure presented in Figure 2.1, however, is only the basic structure of the FraIM. As you read through this chapter and the rest of the book, you’ll discover that there are frameworks within frameworks. They are, perhaps, a little like the Russian dolls you may be familiar with. A small doll is nested within a slightly larger doll and both are nested within the next larger sized doll and so on. All you see is the final, large doll. As you’ll discover, that’s what the FraIM is like. Figure 2.1 shows that there are a number of components or stages in the FraIM. The starting point, however, is the main research question and the process progresses through to the final conclusion.

Once you have decided what your question is, you will be in a position to make decisions about the choice of cases or participants, the methods of data collection to be used, the type of data to be collected and how the data will be analysed. Once the research is underway, the data will provide evidence for the claims you will make about the participants. In turn, this will enable you to reach conclusions about your research question.

Unlike most approaches to research, the FraIM does not dictate that you hold a particular philosophical position prior to beginning the research. It encourages a more responsive, flexible and open-minded attitude based on answering one or more research questions, finding a solution to a problem or addressing an important issue.

The integrated methodology framework, or FraIM, used here gives the impression that it is a linear process, with one stage following the next. At

times, this will be true. At other times, there will be a process of iteration: you will move from one stage to the next and then back again. Sometimes you will make a decision about an earlier stage and then return to it as the research progresses and you amend your plans.

The important factor about the framework is that it functions to help your thinking, your planning and your activities. Most important of all, it acts as a template to guide you through the research process.

## Explaining the FraIM

The following sections provide an outline explanation of each item of the FraIM. In places you may find that the explanation is fairly brief. However, please bear in mind that the purpose of the outline is to provide an overview, or sketch, of the FraIM and its constituent components. The detail comes in later chapters.

Figure 2.2 shows the addition of the different elements that make up each component of the basic FraIM. You'll find that further chapters refer regularly to this extended FraIM.

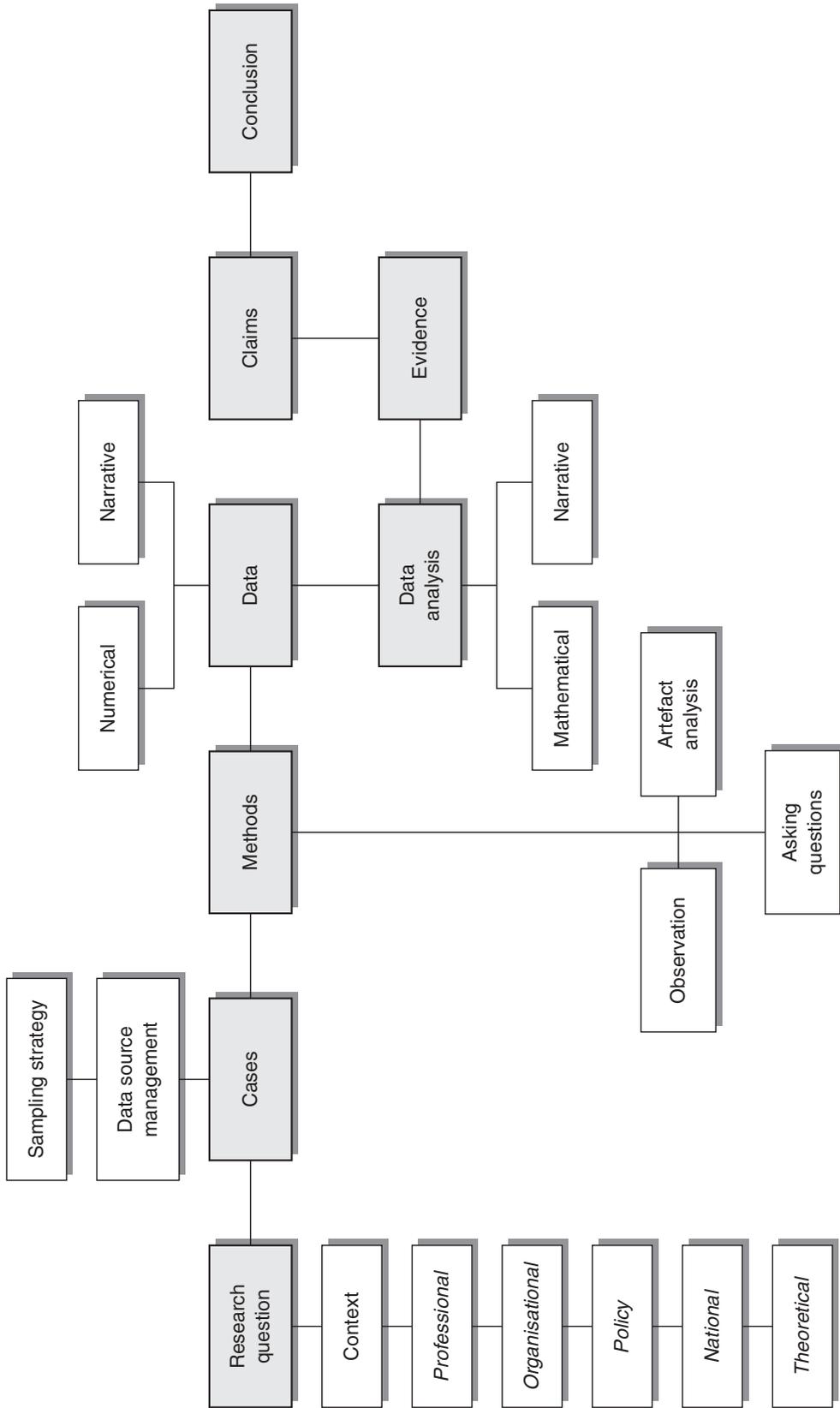
## The research question

Each of the main items of the FraIM is an important element in the research process. In an integrated methodologies approach, the start of the process, however, is the main research question. The question is formulated within a number of different contexts. There are five contexts contingent to carrying out any research, although some will have more importance than others. These contexts are:

- professional
- organisational
- policy
- national
- theoretical.

### Professional context

The professional context provides background information about you, the researcher. This includes what your job or professional role is. For example, if you are a full-time student or a head teacher then this will be part of the professional context of your research. This is information that, eventually, your readers are going to find helpful. For example, how long you have been in your present role? If you work in the health and social care sector, perhaps this is only your second or third year in the profession? This is the kind of information your readers will need to know. It will enable them to place your



**Figure 2.2** The main, extended FraIM

research in a personal and professional context, and help them to understand the potential professional perspective that you might have employed in your research. If say, you are researching students' use of the private study rooms in a university library, then your interest and perspective may be influenced by whether you are a student, a librarian or a member of the university's facilities/buildings department.

It will also be helpful to know why you have chosen a particular topic or subject as the focus of your research. Your previous experiences may have led you directly to your choice. Aspects of your current role may have informed your decision or it may be that a specific event has fired your enthusiasm about your research.

Whatever the source of your interest, being aware of the professional and personal context of your research enables you to answer the following question: out of all the possible topics you might have chosen, why did you choose this particular one? More importantly perhaps, it enables you to be aware of any potential biases you may have about your topic as a result of your previous experiences and perhaps long-held attitudes to the subject. These, in turn, may impact on the kind of questions that you ask in your research and how you interpret the findings.

## Organisational context

Your research may take place in a particular organisational context. For example, it could be a small primary school in England. On this occasion, the number of pupils and teachers may have an impact on how you conduct your research and indeed what is possible, due to the size of the school. The organisational context, in this instance, may limit and restrict how you go about investigating your research question. On the other hand, it may provide opportunities that you wouldn't necessarily have if the school were a large secondary school. In a small school you might be able to carry out research into whole-school policies easier since staff may be more accessible, due to the smaller number in the school.

Different organisations have different cultures and it may be important for you to be aware of the nature of the culture in which your research will be undertaken. Knowing 'how we do things around here' enables any researcher to be more sensitive to what is acceptable or unacceptable when carrying out investigations in a particular organisational context. Of course, if you are already a member of the organisation, if you are a teacher in the school or say, a senior manager in a hospital where your research will take place, then you will already have some idea of the cultural nuances that exist there.

In addition, the organisational context may have an impact on the types of questions that you are able to ask in your research. The context may indeed even determine your research questions, even though you are *not* investigating the organisation as an organisation. Of course, if your research is not located in an organisation, then you will not need to take this element into

consideration. For example, your research may require you to stop people in the street and ask them questions as part of a survey. It will be difficult to imagine what the organisational context would be in a case such as this!

## Policy context

If your research draws directly on government policy, for example, the impact of Ofsted (the Office for Standards in Education) inspections on teacher morale in England, you will need to provide information about current, and probably past, policies relating to the Ofsted inspection process.

However, not all social and educational research is informed *directly* by policy and therefore it may not be necessary, nor helpful, to place your research in a policy context. For example, you may be interested in investigating the links between emotional intelligence and confidence in young adults. Here, the focus of the research would not necessarily benefit from an examination of, for example, the UK's *Every Child Matters* (DfES, 2003) agenda that gives pupils more say in evaluating their experiences of school.

Taking the policy context into consideration will inform your understanding of the issues you are investigating by giving you a wider and better informed perspective. It should also help you formulate more appropriate research questions since being familiar with the relevant policy publications will enable you to identify what issues are associated with those particular policies. Even if your research does not appear to be embedded in an explicit policy context, then you may want to consider Clough and Nutbrown's argument that 'all social research takes place in policy contexts of one form or another' (2002: 12).

## National context

It may seem strange to include a recommendation that you take into account the national context of your research. Again, this may not apply to all research that you might carry out. However, your readers may not be from the same country as you, therefore it's unlikely that they will understand the national context within which your research will be conducted. For example, if the location of your research is in a university, say, in China, then it's doubtful if your readers will have much, if any, knowledge of the university system in that country. You will need to provide some background information about how higher education in China is structured and organised.

Not all research needs to *explicitly* take into account the national context. However, we are living through a massive expansion of globalised communication where, increasingly, we are expected at all levels and in all subjects to bear in mind that what happens in one part of the world can impact on other parts. In addition, research reports in journals or books frequently have an international audience. That audience will need some information about the

national characteristics of the location in which the research was conducted. This might include the structures, the culture and the history of the particular aspect that you are researching. It will provide the national context for your investigation and this is something that you will intuitively be aware of if you are researching in your own country and culture. Others won't have that same awareness!

As with the policy context to your research, the national context may partly determine the research questions you ask, even if those questions are derived from a theoretical perspective. For example, your research may be looking at the theoretical issue of identity and be located in a poor, rural area of South Africa (Plowright and Plowright, 2008). It would be important to provide the national context to research of this nature since it is directly linked to the focus of the research. Furthermore, being aware of the national context may encourage you to consider how your research issues are investigated and reported on in other countries and other cultures.

### Theoretical context

This is conventionally referred to as the *conceptual framework*. It is based on a search and review of relevant and appropriate literature that is focused on the substantive topic of your research. It starts with a literature search that involves collecting and reading a range of publications on your chosen topic or subject. It shows you what other authors, academics and researchers have written about the area and, as Trafford and Leshem point out, 'Their ideas will have given you theoretical perspectives that can guide your thinking about exactly what it is that you will investigate' (2008: 44).

As a result of carrying out a literature review, you will be well placed to develop and construct a conceptual framework that will be used to organise the underpinning ideas and theories in your research. Generally speaking, students find this one of the most challenging tasks in research. Burgess, Sieminski and Arthur explain that 'One of the difficulties you, as a researcher face, is to disentangle the numerous theoretical points of view you come across and make sense of these for your own research' (2006: 41). It is essential, therefore, that you start undertaking a literature search and review as soon as possible!

It's likely, of course, that you will start your research with a fair amount of reading already completed. This will probably come from the other parts of your study programme or even earlier if you have recently completed a previous degree. The advice usually given at the beginning of a dissertation or thesis is that you should choose a topic and a research question that:

- 1 is in an area that you have already spent some time studying or thinking about
- 2 but one that takes you out of your comfort zone.

If you have already spent time studying your topic, then you will have completed some reading and will have started to develop an understanding of

what some of the important issues are. But there is no point in carrying out research that does not challenge you and stretch your abilities: as they say – no pain, no gain!

## Balance

The balance, emphasis and relevance of each of the different contexts will change as a result of the overall situation in which research is conducted.

At times, the professional/personal context may be important since your research might be based on your own past or current experience. At other times, the organisational context will be a priority, especially if your research is about the finances of the organisation. The national context may play only a small role in your thinking as you formulate your research question and carry out the subsequent research. At other times, it may be very important to take the national context into account, especially if you are undertaking a comparative study of, say, management issues in two hospitals.

Whatever the focus of your interests, there will always be contextual factors that come into play and these need to be considered as you start on your research.

## Justification for your research question

There is another important factor that you need to be aware of when you start to plan your research. The different contexts will provide you with a justification for your research question. For example, as a result of your *professional* experience of, say, working in a further education college, you may have identified a specific problem with the college's quality assurance procedures related to collecting feedback from students about their learning experiences.

Imagine that, as part of your middle management responsibilities in cross-college quality committee meetings you have continually asked: 'Why are there problems with collecting and collating formative evaluation feedback from students throughout the college, in order to ensure that continuous improvement is ongoing?' No one seems to have an answer to your question! It is something that needs addressing urgently, since it is likely that the college will be inspected very soon. However, up to now, you have not had the opportunity to investigate what can be done to improve such procedures in your organisation. Consequently, you have now decided that you will focus on this issue for your research.

You are already aware of the pressures that management of the college are under in terms of the *policy* requirements from the funding bodies and inspection services. You have lived with these for some time. You know, therefore, where to access information about what is needed to meet the government's accountability agenda through the college's quality enhancement regime. These also include the legal requirements at *national* level to which all further education colleges in England (UK) are subject.

After having undertaken some reading as part of your literature search, you begin to develop an understanding of the *theoretical* issues associated with, say, change management. These will help you to conceptualise the changes that might be needed to improve the quality assurance systems in the college. So, as you think through your intended research, you begin to realise that your research question is firmly placed in a number of contexts.



### Summary 2.1

- Your research will start with a clearly expressed research question.
- It will be formulated in relation to:
  - the professional context within which your research will be carried out
  - your own personal interests and professional role
  - the organisational context which may limit the kind of research you will carry out
  - a policy context which may have a direct or indirect impact on your research
  - a national context
  - a theoretical context that provides the conceptual framework of your research.

## The cases

Once you have formulated your research question, it will be clear that your research will involve one or more sources of information. These sources will provide you with the data for your research. Hammersley (1992) argues for the use of the term 'cases' to describe the sources of data and these can range from individuals to organisations or international social systems. In some analytical software, including the commonly used SPSS (Statistical Package for the Social Sciences) the term 'case' is also used to refer to the data sources. More conventionally, when sources of data are individuals, they are usually referred to as participants, respondents or informants.

The term 'cases', however, seems to capture the wide range and variety of data sources that are used in research. These can vary from, say, pupils being aggressive in the playground to organisations with different cultural identities. In the former, the cases are the pupils and in the latter, the organisations. On the other hand, cases might refer to inanimate objects. For example, in a study of graffiti in bus shelters, you might be interested in the messages that are scratched and written on the walls of the shelters. The cases, in this instance, would be either the shelters or the walls.

Selection of cases takes place at two levels: the first level can be referred to as data source management and the second as sampling decisions. The first level involves deciding on which approaches are to be used for managing the sources of data. The choice is:

- case study
- experiment
- survey  
(Hammersley, 1992: 184).

Chapter 3 will explain and discuss, in some detail, the criteria on which data source management is based. It will do this by discussing the similarities and differences between case studies, experiments and surveys. This approach may appear somewhat unusual, especially if you are already familiar with using terms such as 'participants' or 'respondents'. Well, this is a different approach to thinking about how to approach your research!

Although the next chapter provides detailed information about data source management, it will be helpful to mention here that there are three criteria to consider in the decision-making process about how to organise your cases. These are:

- the number of cases in your research
- the degree of control you, as the researcher, have over which cases are allocated to which groups
- the degree of naturalness, that is, the ecological validity, of the groupings.

In keeping with the focus of this book – that of integrating different approaches at all stages in the research process – it will explain, with examples, how you can use a combination of different data source management procedures in your research.

### Sampling decisions

Once you have decided which approach to data source management is appropriate for your research, you will need to make a decision about sampling. Sampling decisions determine which cases to include in your research. The cases will be allocated to the groups resulting from your data source management decision.

The same process of making sampling decisions can be used for case studies, experiments and surveys, and Chapter 4 will explain this process more fully.

### Methods of data collection

By now, you will have formulated your research question, taking into account the contexts within which your research will be planned and undertaken. You will also have made a decision about how you will approach the task of data source management and how you will select your cases through one or more sampling decisions. It is now time to consider how you will collect the data from your cases.

Research based on the FraIM argues that there are three types of methods of data generation and collection:

- observation
- asking questions
- artefact analysis.

It may appear unusual that all data collection can be subsumed under these three headings. However, there is a logic and persuasiveness about such an approach. An explanation of the underlying rationale for this will be provided in some depth in Chapter 5. For the moment, since you are still in the preliminary stages of thinking through your research, it will be sufficient to briefly describe the main characteristics of the choices open to you.

*Observation* can include covert or overt observing of behaviour. This can include audio-recording of discussion and verbal interchanges. It could be, for example, the observation of non-verbal behaviour or hand-raising by pupils when answering questions in a school classroom.

*Asking questions* can involve carrying out interviews with your respondents. These might be highly structured using an interview schedule or they may be semi-structured interviews, based on an interview guide that lists only areas for discussion. However, it may be more appropriate to use a far less structured approach in order to explore interviewees' feelings about, say, the level of stress they experience in the workplace. Asking questions can also involve using a written, self-completion questionnaire containing open-ended and/or closed questions. More detail is provided in Chapter 7 including the increasing use of communications technology to ask questions.

*Artefact analysis* refers to objects or events that are produced by people. These might be radio and TV programmes or advertisements; they could be publicity brochures produced by a university or a school or a business organisation. They may be diaries produced by schoolchildren about their experiences of holiday adventures. They also include theatre, dance, food and drink. The type of artefacts that are data sources for research is based partly on the senses but also includes examples of text-based artefacts and what can be referred to as a kinaesthetic/spatial dimension. These are discussed later in some detail in Chapters 8 and 9.

## Choice of methods

Your choice of method will be characterised by the following:

- the degree of structure
- the level of mediation, that is, the proximal/distal location of the researcher in relation to the issues under study.

The *degree of structure* of data collection methods will determine the level of pre-structuring of the data collected. This has implications, therefore, for the way that data are generated, collected and analysed. This will be explained fully and in detail in Chapter 5 which will also explain the criteria on which degree of structure is based.

The *level of mediation* is no less important than the idea of structure in deciding on how appropriate a method of data collection might be. For example, when comparing asking questions and observations, the former tend to be at a relatively high level of mediation. On the other hand, observations tend to be at a relatively low level of mediation. The researcher is usually physically and temporally closer to the phenomena being studied.

Different levels of mediation and degree of structure in research methods raise different issues when carrying out research informed by the integrated methodology of the FraIM. For example, they create different potential sources of error and bias for the research. These will be explained and discussed in some detail in the following chapters. For the moment, as you plan and design your research, you will be considering which methods of data collection you will use. You will need to take into account the aims of your research; the purpose of the research, who or what the cases are and, of course, the research question.



### Summary 2.2

- The term 'cases' refers to the sources of data for your research.
- Selection of cases takes place at two levels: data source management and sampling decisions.
- Strategies for managing the sources of data include case study, experiment and survey.
- Criteria for choice of data source management are:
  - the number of cases in the research
  - the degree of control the researcher has over which cases are allocated to which groups
  - the degree of naturalness, that is, the ecological validity, of the groupings.
- Sampling decisions determine which cases to include in your research.
- There are three types of methods of data generation and collection: observation, asking questions and artefact analysis.
- Choice of method will be partly characterised by two criteria: degree of structure and level of mediation.

## Data

The next stage in the FraIM concerns the data you will collect in your research. There are two categories of data: numerical and narrative. When you collect numerical data, you will be interested in counting and measuring. You will be dealing with numerical information about the issues you are studying. The data are often seen as unambiguous, fixed and drawing on the use of the logical code of mathematics.

Narrative data deal with words and media texts, that is, still and moving imagery, rather than numbers. The data are very often experienced as ambiguous. They

have meanings that are fluid and often contentious, with more opportunities for different interpretations, depending on a range of factors, including the context and the people involved. Narrative data draw on conventional codes of meaning that are based on the use of language or visual or auditory imagery, with all their complexities and ambiguities.

Each type of data has further characteristics that will be explained in more detail later. You'll find that each has advantages and disadvantages and different functions and purposes. As you plan your research, at this stage you will need to consider what type of data you will collect.

## Data analysis

The next stage in the planning process is to determine how you will analyse your data. If you took a relatively traditional approach to research, you would probably be looking forward to using mathematical and statistical analyses for numerical data and, say, theme analysis for narrative data. However, you may not want to restrict yourself to such approaches. You may want to turn your narrative data into numerical information and describe your numerical data with the use of narrative.

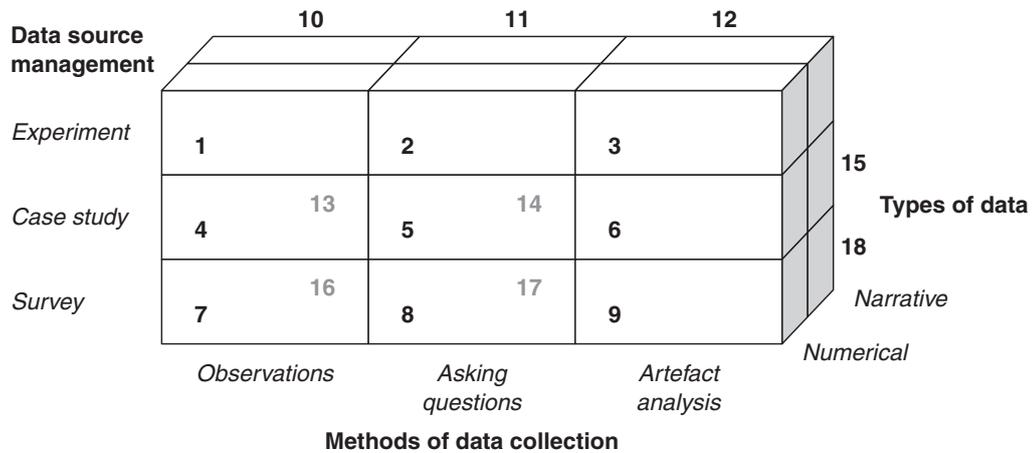
## A synthesis

You are now in a position to start the process of integrating the different components of the FraIM. This initial integration will focus primarily on the cases, methods of data collection and types of data leading to the three dimensional model shown in Figure 2.3.

The first, rather obvious, point to note is that there are eighteen cells in the model. Each cell represents a combination of each of the three elements from the FraIM. Any or all of the cells are a permissible combination when undertaking research, although to cover all cells would be a mammoth undertaking!

Tables 2.1 and 2.2 provide examples that draw on the use of, respectively, numerical and narrative data. The tables outline a number of imagined research projects where the main research question might be: 'What are the salient factors associated with girls' aggressive behaviour in a rural primary school?' In addition, there will also be a number of sub-questions that the research will focus on. Table 2.1 consists of cells 1 to 9 from the model, which cover the collection of numerical data aimed at contributing to answering the main research question.

Table 2.2, consists of cells 10 to 18, which cover the collection of narrative data. First, the examples in both tables are a very brief demonstration that case selection, methods of data collection and types of data can be effectively combined. Second, they show that both numerical and narrative data can be collected using the same methods, that is, asking questions, observing and analysing artefacts. Further, they also show that, contrary to what some researchers argue, numerical data can be employed, for example, when a case study is used and narrative data can be collected using an experimental approach.



**Figure 2.3** Simple three-dimensional model of an integrated approach to designing research

**Table 2.1** Research using numerical data

<b>Methods of data collection</b>			
	<b>Observations</b>	<b>Asking questions</b>	<b>Artefact analysis</b>
<b>Experiment</b>	<b>Cell 1</b> Numerical data are collected as a result of observing aggressive behaviour in a school playground under different conditions. There are two conditions: (1) boys and girls segregated (2) boys and girls not segregated.	<b>Cell 2</b> An interview schedule, based on a Likert scale, is used to collect numerical data about how often a number of selected boys and girls witness aggressive behaviour during segregated and nonsegregated playground time.	<b>Cell 3</b> Numerical data are collected as a result of analysing pupils' diaries about aggressive behaviour in a school playground under different conditions of gendered segregation and non-segregation.
<b>Case study</b>	<b>Cell 4</b> Numerical data are collected using a checklist of the occurrence of aggressive behaviours in the playground from one group of girls at one case study primary school.	<b>Cell 5</b> An interview schedule, based on a Likert scale, is used to collect numerical data when interviewing a small group of particularly aggressive girls in a primary school.	<b>Cell 6</b> Numerical data are collected as a result of analysing the written stories and diaries of a small case study group of particularly aggressive girls about behaviour in a primary school playground.
<b>Survey</b>	<b>Cell 7</b> Numerical data, using a rating scale, are collected using observations of a sample of lessons to determine the level of aggressive behaviour of pupils.	<b>Cell 8</b> Using an interview schedule, based on a Likert scale, a sample of parents are interviewed about known incidences of aggressive behaviour in a primary school.	<b>Cell 9</b> Using a structured coding schedule, a sample of letters from parents is analysed for the number of complaints that are made about aggressive behaviour in a primary school.

Table 2.2 Research using narrative data

<b>Methods of data collection</b>			
	<b>Observations</b>	<b>Asking questions</b>	<b>Artefact analysis</b>
<b>Experiment</b>	<p><b>Cell 10</b> Narrative data are collected as a result of observing behaviour in a school playground under different conditions. There are two conditions: (1) boys and girls segregated (2) boys and girls not segregated.</p>	<p><b>Cell 11</b> Interviews are carried out, using open-ended questions, about how boys and girls feel about segregated and non-segregated playground time.</p>	<p><b>Cell 12</b> Pupils' visual artwork, about the topic of aggressive behaviour in a school playground, is analysed and related to different conditions of gender segregation.</p>
<b>Case study</b>	<p><b>Cell 13</b> Narrative data are collected using a less structured approach to observing the occurrence of aggressive behaviours in the playground at one case study primary school.</p>	<p><b>Cell 14</b> Interviews are carried out with a small group of particularly aggressive girls in a primary school aimed at trying to understand their perceptions of aggression on friendship issues.</p>	<p><b>Cell 15</b> The recorded and transcribed informal classroom conversations of a small group of girls in a primary school are analysed using discourse analysis.</p>
<b>Survey</b>	<p><b>Cell 16</b> Narrative data are collected, using a less structured approach to observing a sample of lessons to determine the level of pupils' aggressive behaviour.</p>	<p><b>Cell 17</b> A sample of parents is interviewed using open-ended questions, about their views of the level of aggressive behaviour in a primary school.</p>	<p><b>Cell 18</b> A survey is undertaken of material placed on notice boards and display boards throughout a primary school to determine if they present aggressive attitudes and behaviour.</p>



### Summary 2.3

- There are two types of data: numerical and narrative.
- Numerical data are generated as a result of counting and measuring.
- Narrative data deal with words and media texts, that is, still and moving imagery.
- There is no necessity to restrict data processing to mathematically analysing numerical data and using narrative analysis for narrative data.
- Narrative data can be transformed into numerical information and numerical data can be described using narrative.
- Eighteen different research strategies can be generated by integrating case selection strategy, methods of data collection and types of data.
- Both numerical and narrative data can be collected using the same methods of data collection.

## Conclusion

This chapter has outlined a number of basic issues that you need to consider when starting to design and plan your research based on the FraIM. It has provided an overall, general introduction to the framework by outlining the main elements of the FraIM. These are the research question and the context within which the research will be undertaken; the data source management and the sampling decisions underlying the case selection strategy; the methods of data collection you intend to use; the types of data you will collect and the analyses of those data. In addition, there has been an opportunity to see how the FraIM can be applied to your own proposed research.

This chapter has argued that it is possible to use and integrate different combinations of data sources, methods and types of data as part of a research project. The chapter has introduced a different way of thinking about categorising the sources of data for research and describing the types of data that can be collected. Further, the chapter also explained that there is a choice in the way you analyse your data.

The next chapter starts the process of looking in some detail at the elements within the FraIM, beginning with data source management.

### Reflections

- 1 To what extent is the FraIM different to the approaches to research you have previously encountered?
- 2 Draw out the main, extended FraIM and fit your own research into each of the components.
- 3 How useful do you find the FraIM in helping you think through your research?
- 4 Is there anything missing from the FraIM that you think should be included?

### Associated reading

- Bergman, M.M. (ed.) (2008) *Advances in Mixed Methods Research*. London: SAGE. See Chapter 1, 'The straw men of the qualitative–quantitative divide and their influence on mixed methods research'.
- Blaikie, N. (2000) *Designing Social Research*. Cambridge: Polity. See Chapter 3, 'Research questions and objectives'.
- Blaxter, L., Hughes, C. and Tight, M. (2006) *How to Research* (3rd edn). Maidenhead: Open University Press. See Chapter 2, 'Getting started'.
- Bourner, T. (1996) 'The research process: four steps to success', Chapter 2 in T. Greenfield (ed.), *Research Methods: Guidance for Postgraduates*. London: Arnold.

## 22 USING MIXED METHODS

- Creswell, J. (2003) *Research Design: Qualitative, Quantitative and Mixed Methods Approaches* (2nd edn). London: SAGE. See Chapter 6, 'Research questions and hypotheses'.
- Punch, K.F. (2009) *Introduction to Research Methods in Education*. London: SAGE. See Chapter 4, 'Research questions'.
- Knight, P. (2002) *Small-Scale Research*. London: SAGE. See Chapter 1, 'Starting with writing'.
- Teddlie, C. and Tashakkori, A. (2009) *Foundations of Mixed Methods Research: Integrating Quantitative and Qualitative Approaches in the Social and Behavioral Sciences*. London: SAGE. See Chapter 6, 'Generating questions in mixed methods research'.