

# 1

# THE NATURE OF SOCIAL RESEARCH AND THE EMERGENCE OF MIXED METHODS

## INTRODUCTION

In this chapter, the nature and origins of social research are described and the various forms it takes discussed. It is important for intending users of social research to understand the context in which the methods of social research have been developed and applied so that they are aware of their uses and limitations.

Social research methods are used in a number of quite distinct social sciences. They are not exclusive to any one particular social science such as sociology. Each of the social sciences uses research methods in ways deemed to be most suitable to their fields of study.

Research methods have traditionally been differentiated in terms of whether they involve the collection of quantitative or qualitative data. Quantitative data is data where concepts are measured on a numerical scale. Examples of such concepts would be a rating of a teacher's effectiveness, say, on a 7-point scale, or asking people to indicate their agreement with an attitude statement by assigning a numerical value to represent their opinion. Qualitative data is data for which no numerical measure has been assigned. Such data can be textual as in a description of the effectiveness of a teacher by a former student, visual as in a picture or film segment, or observational as in a description of children interacting in a playground.

In some social sciences, such as psychology, until recently quantitative methods have predominated, while, in others, for instance anthropology, qualitative methods have been more widely used. But all social sciences use both.

Newer, emerging fields within the social sciences such as criminology, evaluation and policy analysis have embraced a wide range of research methods. Indeed, evaluation has pioneered the use of mixed-methods research, as will be outlined later in this chapter. An example of an evaluation study using mixed methods is provided in Box 1.1. What this study shows is how a range of research methods can be used in a single study to provide information – in this case, about the success of a programme whereby changes to the environmental conditions are made, designed to increase physical activity in communities as a way to improve public health.

Mixed methods refers to the combination of quantitative and qualitative methods in the one study. The term is of recent origin but, as pointed out by Fetters (2016) and Maxwell (2016), there is a long history of studies combining qualitative and quantitative methods. What is new about mixed methods is that it systematises the ways in which these methods can be fruitfully combined.

The background to the emergence of mixed methods as a research strategy has been the longstanding debate between proponents of quantitative methods and those of qualitative methods as being most appropriate for the social sciences. This debate will be described in more detail later in this chapter. But, to understand the debate, a discussion of research methodology and the influence of philosophical positions about what constitutes knowledge, is needed.

Before discussing these debates, some general background about the nature and goals of social research is outlined. This is followed by a discussion of debates around research methodology and the emergence of mixed methods.

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## BOX 1.1

### AN EXAMPLE OF AN EVALUATION STUDY USING MIXED METHODS

Brownson et al. (2012) reported an evaluation of a programme termed Active Living by Design (ALbD) to increase physical activity in 25 communities across the USA. The programme was designed to modify the environment so as to promote increased healthy lifestyle changes through physical activities such as walking, cycling, and so on. To evaluate the outcome of this programme, the authors used eight research methods comprising quantitative and qualitative methods. These were: a survey of partnerships in the 25 communities to identify capacity to identify social and public health problems; a concept-mapping exercise involving selected community representatives to determine priorities for creating change to increase physical activities; a progress reporting system designed to document activities and accomplishments; key informant interviews with individuals who have expertise or experience in implementing changes; focus group interviews with individuals representing various sub-groups in the communities to find out what changes had been implemented and how successful they had been; photos and videos of completed projects; environmental (community) audits to determine

whether environmental conditions for increased physical activity had changed as a result of the programme; and direct observations of community members using facilities provided by the programme.

The evaluation using all these methods found that the programme had succeeded in increasing physical activity in those projects that had been completed at the time the evaluation was conducted. Some large-scale changes were still in progress and thus couldn't be evaluated.

The authors added that using mixed methods enabled the effects of changes to be more clearly identified by overcoming the limitations of any one method.

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## CATEGORIES OF SOCIAL RESEARCH

It is important to identify the type of social research being planned as each type has a different focus and aim.

Three major categories of social research have traditionally been identified. These are: **basic research**, **strategic research** and **applied research**. While the differences among these can sometimes be blurred, the general thrust of each is usually evident in any particular research project. The characteristics of these three types will now be outlined.

Basic research is research conducted with the aim of extending knowledge in the field in which the research is conducted. It is said to be curiosity driven. That is, a researcher seeks to answer questions posed by gaps in knowledge arising from existing research. It is not designed to provide solutions to practical problems nor is it designed to further the goals of governments or other organizations. This does not mean, however, that basic research does not have any practical application. Indeed, many basic research findings across a wide range of scientific areas have provided breakthroughs in providing solutions to practical problems. It is, of course, likely that furthering knowledge in any scientific area will lead to useful applications, but this is an incidental consequence of basic research rather than its goal.

Much basic research involves theory testing. That is, social scientists devise theories to explain social processes, deduce predictions from these theories and conduct research to test these predictions. Should the predictions be confirmed by the research findings, the theory is supported; whereas if the predictions are not confirmed, the theory is either rejected or modified.

When basic research is conducted to test theories, the focus of the research is specific and tends to be narrow. The methods used tend to be single methods such as the randomized control trial, to be discussed in the next chapter. Mixed methods have not typically played a major role in such research.

Basic research is conducted primarily in universities or research centres and is funded predominantly by government grants.

**Strategic research** is research conducted in specific areas considered to be important by governments. It shares many features in common with basic research but tends to be more

narrowly focused – for example, research focused on ageing where the aim is to understand the problems faced by elderly citizens so that governments can devise programmes to address these problems.

Strategic research is conducted predominantly in research centres established either by governments or non-government organizations such as philanthropic, service provider or other non-profit organizations to conduct research in a specific area considered to be important to policy. An example of such a research centre is the John Hopkins Center on Aging and Health at the John Hopkins University in Baltimore, Maryland. This Center was established in 1998 to conduct research aimed at improving the health of older adults. An example of a non-university research centre is the Social Impact Research Center located in Chicago, Illinois. This centre is part of the Heartland Alliance programme, a non-profit organization in the USA dedicated to ending poverty.

While strategic research is focused on a particular policy area, it tends to be broader in scope than basic research. Mixed methods are more likely to play a role in the conduct of strategic research than in basic research, although, as we will see, mixed methods are increasingly being used in all forms of research.

**Applied research** is research conducted to address specific issues or problems considered to be of practical significance. The focus of applied research is on problem solving rather than on expanding the knowledge base in a discipline or area of research. Bickman and Rog (1998: x) have defined applied research as research which ‘uses scientific methodology to develop information to help solve an immediate, yet usually persistent, societal problem’.

Applied research is usually commissioned by governments, industry or non-profit organizations with interests in specific social issues or problems to gain more information on the nature of the issue or problem. These organizations fund the research and decide the questions to be answered. The funding body then awards the contract to the applied researcher who then reports the findings to that body.

Programme evaluation can be regarded as a form of applied research since it is aimed at determining whether a programme, such as a mental health rehabilitation programme, is effective. The evaluation outlined in Box 1.1 is an example of such a piece of applied research.

**Action research** is a form of applied research that aims to bring about social change. Participatory action research (Kemmis and McTaggart, 2003) likewise aims to confront and overcome irrationality, injustice, alienation and suffering by involving local communities in research to improve their social conditions.

Mixed methods have played a major role in applied research, particularly in programme evaluation, as we have seen. This is because finding solutions to social problems involves collecting information from as many sources and in as many forms as necessary to understand the problem and find possible solutions.

While there are other classifications of varieties of research (e.g. Bulmer, 1978, 1986), the one presented here is widely accepted.

The main features of these types of social research are summarized in Table 1.1.

**Table 1.1** Main varieties of research and their typical distinguishing characteristics

Typical features	Type of research		
	Basic	Strategic	Applied
Purpose	Expanding knowledge	Expanding knowledge in a limited field of study	Practical application of findings
Motivation	Curiosity driven	Policy relevance	Problem solving
Location	Mainly universities	Mainly research centres	A wide range of settings including private consultancies
Funding	Mainly government grants	Government and many non-government organizations	Government and private sector grants
Utilization	Improving understanding and testing theories	Assisting organizations to improve policy	Finding solutions to social problems

## GOALS OF SOCIAL RESEARCH

Social research is conducted for a range of purposes, which impact on the nature of the research methods used. Most analyses of research distinguish three main goals: exploration, description and explanation (e.g. Babbie, 2016; Neuman, 2011). All three goals employ both single-method and mixed-methods research designs. These goals are described as follows.

### Exploration

Exploratory research is aimed at gaining information about a topic that very little is known about. The topic may be a new one or one that has become important due to changing social or economic conditions, such as the use of social media by employers to profile employees or job applicants. This topic has gained in importance as some employers are accessing social media such as Facebook to gain information about their employees without the knowledge of their employees, resulting in concerns about potential breaches of privacy (see Box 1.2).

#### BOX 1.2

### AN EXPLORATORY STUDY OF PROFILING EMPLOYEES ONLINE

A study by McDonald, Thompson and O'Connor (2016) analysed data from a survey of the UK and Australia to study the prevalence of profiling and the extent to which employees are informed

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of this practice. In some cases, the study found that employers have asked for the passwords of their employees' social media accounts.

The study also examines employee responses to such practices, including the extent to which they take action to protect their privacy by limiting access to their social media accounts.

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Exploratory studies often form the basis for more specific follow-up studies. They set the groundwork for further research on the topic. They seek to establish the main areas and issues that are in need of more detailed investigation.

## Description

Descriptive research aims to identify the major characteristics of a field of research. It focuses on the 'what', 'how' and 'who' questions rather than the 'why' questions.

Descriptive studies are the most common type of research in the social sciences. This is because they identify the key characteristics of the social situations under investigation. Knowing these characteristics is necessary before any explanatory research can be undertaken. That is, we need to answer the 'what', 'how' and 'who' questions before we can ask the 'why' questions.

## Explanation

Explanatory research focuses on the 'why' questions. It aims to determine the causes of social phenomena. It uses research methods designed to establish causal mechanisms, often through testing predictions from theories that propose causal relationships.

Explanation is often seen as the ultimate goal of social research because it goes beyond description into establishing cause-effect relationships in the social sciences or through confirming predictions from social theories.

Explanatory research can be either basic or applied. Some evaluation research, for example, seeks to establish why programmes work or why they do not (explanatory), rather than simply establish whether or not they work (descriptive).

Explanation as a goal of social research is an optimistic one, since social processes are extremely complex and don't lend themselves to simple explanations. Hence, most explanatory research involves testing theories about social processes.

## Alternative formulations of research goals

The goals set out above are very general and other, more specific ways of categorizing goals of social research have been proposed. For example, Ragin and Amoroso (2011) identify seven goals of social research, as set out in Box 1.3.

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### BOX 1.3

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#### GOALS OF SOCIAL RESEARCH ADAPTED FROM RAGIN AND AMOROSO (2011)

1. Identifying general patterns and relationships: this goal involves identifying social phenomena that are common to a range of situations. Achieving knowledge that can be generalized beyond specific situations is seen as a goal of all science so that it brings social science into line with other sciences.
2. Testing and refining theory: testing existing social theories and using the results of these tests to refine or even abandon theories is seen to be an important goal of social research. By refining theories, an understanding of social phenomena can be advanced.
3. Making predictions: using social theory and knowledge to predict future trends is also a goal of social research. At the present state of knowledge in the social sciences, prediction of rates such as use of illicit drugs in a city or region is more realistic than is the prediction of specific events.
4. Interpreting culturally or historically significant phenomena: cultural and historical events are important landmarks in the development of human society so that understanding their significance is a goal of social research.
5. Exploring diversity: social and cultural diversity is a characteristic of human societies and so an understanding of the nature of such diversity is an important goal of social research.
6. Giving voice: enabling marginalized groups in society to be heard can reveal aspects of society that cannot otherwise be uncovered. Hence, giving voice to such groups and individuals can also be seen as a goal of social research.
7. Advancing new theories: social research often produces evidence that is not explicable under existing theories so that developing new theories to accommodate such evidence is another worthwhile goal of research.

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Still other goals can be identified. One goal that is a common feature of much social research is achieving *understanding*. Researchers study a particular social or cultural event in order to gain an in-depth understanding of that event. This goal is implicit in goals 4, 5 and 6 in Box 1.3, but many researchers feel the need to make this goal explicit.

## SOCIAL RESEARCH METHODOLOGIES AND PARADIGMS

### Methodologies and methods

A research project will involve choosing one or more research methods in order to collect data. What determines which research methods are used in any particular study is the research methodology adopted by a researcher. A **methodology** is a set of principles that identifies

what practices count as research. A *method* is the practice by which research is conducted. The aim of a methodology is to set out the criteria by which research is conducted, whereas the aim of a research method is to generate data to answer **research questions**. The methodology, then, is the theory that tells us what constitutes a research method and the method is the means by which we conduct research.

Quantitative and qualitative research can be seen as two competing methodologies that seek to decide what counts as knowledge in the social sciences. These are set out in Table 1.2, along with a mixed-methods methodology.

As can be seen from Table 1.2, mixed methods combines the features of quantitative and qualitative research and in this sense is not subject to the limitations of either.

While all forms of research can be either descriptive or exploratory (see above), much quantitative research is said by its proponents to be aimed at explanation. Whether it can achieve this goal is a matter for debate. Indeed, qualitative researchers challenge this goal and instead substitute a form of ‘in-depth’ understanding of social phenomena. This ‘understanding’ is a form of description that seeks to provide insights into social realities through an analysis of textual data obtained by in-depth interviews or group discussions. They argue that attempting to quantify social concepts is misplaced and only serves to oversimplify them. Social reality, they claim, is complex and cannot be reduced to measurable concepts.

Mixed methods is an attempt to overcome this divide by incorporating both approaches into the social research methodology. To do this, advocates of mixed methods accept that some concepts can be meaningfully quantified while others cannot. By combining both in a research project, they claim that the goals of explanation and understanding can be achieved. In this sense, it can be argued that mixed methods may provide a resolution of the ‘paradigm wars’, as discussed in the next section.

**Table 1.2** Defining characteristics of quantitative, qualitative and mixed methodologies

Defining characteristics	Methodology		
	Quantitative	Qualitative	Mixed
What counts as data?	Social concepts are defined as variables which can be measured	Social concepts are textual or observational and as such are not measurable	Some social concepts are measurable while others are not
How is research conducted?	Social measurements are made in an objective, neutral manner	Social concepts are obtained through methods designed to provide textual data	Social concepts are obtained either by measurement or by methods designed to yield textual data
How are social concepts analysed?	Social measurements are related through statistical analysis	Social concepts are analysed by detailed textual analysis	Social concepts are analysed by both statistical and textual analysis
What is the aim of research?	Explanation, description or theory testing	Understanding, theory testing, description	Explanation, description, theory testing and understanding



## PARADIGMS AND THE 'PARADIGM WARS'

What became known as the 'paradigm wars' throughout the 1980s was the debate between proponents of quantitative methodology and those of qualitative methodology as to which was the appropriate way to conduct social research.

Quantitative research had dominated some social sciences through the early part of the twentieth century, particularly education, psychology and some areas of sociology until qualitative researchers began challenging the assumptions underlying quantitative research. There are many good summaries of this debate, such as those of Gage (1989), Sale, Lohfeld and Brazil (2002), or in the collection of articles in Reichhardt and Rallis (1994), so only a brief description will be given here.

Quantitative research was built on a number of assumptions, including:

- Research should be objective and value-free.
- Social concepts are defined as variables which are measurable.
- Social scientific knowledge progresses through the establishment of relationships among these variables by the application of inferential statistics.
- The aims of social research are explanation and prediction.

These assumptions became identified with the paradigm called **positivism**. A **paradigm** is a set of concepts that specify how science should be conducted and what counts as knowledge (see Box 1.4). The concept of a paradigm and its relevance to the social sciences will be discussed in more detail in Chapter 3.

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### BOX 1.4

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## PARADIGMS IN RESEARCH

### What is a paradigm?

Paradigms play an important role in the mixed-methods literature for reasons outlined in the text. The term has been adapted from Kuhn (1970), whose book *The Structure of Scientific Revolutions*, first published in 1962, stimulated a whole new field of discussion about the nature of scientific progress. Kuhn defined a paradigm as 'universally recognized scientific achievements that, for a time, provide model problems and solutions for a community of practitioners'. Science progresses, according to Kuhn, by paradigm shifts, where a new paradigm emerges when the existing paradigm outlives its usefulness and is discredited. Although Kuhn did not consider the term applicable to the social sciences, it has been widely used in this context. As Morgan (2007) points out, it has been given at least four different meanings in the social scientific literature: a world view; an epistemological stance; shared beliefs among a community of researchers; and model examples of research. Although Morgan (2007) argues

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that the third of these is closest to what Kuhn defined as a paradigm, he does acknowledge that the second meaning, namely a paradigm as an epistemological stance, has been the most commonly used meaning in discussions of social science methodology.

The positivist approach to research only admits as knowledge evidence that has been collected through the application of ‘scientific method’, interpreted as making objective, value-free observations. So the quantitative researcher is more likely to use methods that provide this kind of data, such as experiments, surveys, or observational studies that involve collecting quantitative data.

Qualitative research, on the other hand, has long been associated with anthropology and some areas of sociology and psychology. Qualitative researchers maintained that social interaction is a complex meaningful phenomenon and as such cannot be reduced to objective quantitative measures. They argue that social phenomena are different from natural phenomena in that social interactions involve meaning in a way that natural phenomena does not. So methods that are applicable to the study of natural phenomena are of little or no use in the study of social phenomena.

Those supporting qualitative research have argued against positivism and instead supported the paradigms of **interpretivism** or **constructivism**. Many quantitative researchers have also rejected positivism and have moved to a paradigm referred to as **post-positivism** in an attempt to relax some of the contested claims of positivism, such as objectivity of observations and value freedom of research. These paradigms are outlined in Table 1.3. Both interpretivism and constructivism focus on the meaning and understanding of social phenomena and this must take into account the context in which the phenomena occur. For this reason, qualitative researchers are most likely to use methods such as field studies, case studies or in-depth interviewing, where complex qualitative data is obtained.

**Table 1.3** Four paradigms for social research

Paradigm	Key features	Typical methods	Data type
<b>Interpretivism</b>	Social reality conveys meaning and the goal of social science is to interpret meaning	Field study Case study	Qualitative
<b>Constructivism</b>	Reality is socially constructed; social constructions are the subject matter of social science	In-depth interview	Qualitative
<b>Positivism</b>	Observations are to be objective and value-free and in accordance with scientific method	Experiment, Survey	Quantitative
<b>Post-positivism</b>	Values and bias are present in all observations but efforts should be made to limit their impact	Mixed methods	Quantitative and qualitative

The debate between positivism and its critics intensified during the 1970s and 1980s. It was the establishment of mixed methods during the 1990s that, to some extent, sidelined the dispute. As a consequence, additional paradigms were adopted by researchers in order to overcome the limitations of those set out in Table 1.3. These paradigms include pragmatism and realism and will be discussed in Chapter 3.

## THE EMERGENCE OF MIXED METHODS

Although researchers had been using mixed methods long before the 1990s, it was not until then that it became recognized as a third paradigm for social research. Much of the development of mixed methods research has emanated from the field of programme evaluation. Evaluating social programmes is a complex task requiring the development of measures of programme performance as well as stakeholder consultation involved in delivery of the programme to gain a fuller understanding of its aims and mode of operation. Evaluators found that they needed both quantitative and qualitative data to answer all the questions posed by the evaluation, making programme evaluation a fertile ground for the development of mixed methods.

Jennifer Greene has been one of the pioneers of mixed methods in the field of evaluation and in an early paper (Greene, Caracelli and Graham, 1989) developed a framework for mixed-methods designs that has been influential in later work on these designs.

‘Mixed methods’ has come to be defined as the use of both qualitative and quantitative methods in the same project. Those advocating mixed methods argued that the advantages gained from combining both forms of research were so great that the paradigm wars became irrelevant. The rationales offered for this view will be discussed in Chapter 3, but it is worth pointing out now that they have defused the debate over quantitative and qualitative methods.

The advantages claimed for using mixed methods are set out in Box 1.5. They do not specifically address the issues raised in the paradigm wars but rather present practical reasons for their use. This does not of course mean that the philosophical positions that gave rise to the paradigm wars can just be swept aside, but that practical considerations need to be addressed.

Mixed methods gained support from a wide range of social research areas in the 1990s. By the first decade of the 21st century, specialist mixed-methods texts had appeared, notably Teddlie and Tashakkori (2009), Cresswell and Plano Clark (2017) and Greene (2009), and in 2007 *The Journal of Mixed Methods* was launched. From a relatively obscure beginning, mixed methods has now become accepted as an integral part of the research methods establishment.

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## BOX 1.5

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### ADVANTAGES OF USING MIXED-METHODS RESEARCH

1. Mixed methods enables researchers to answer a wider range of research questions than in single methods. It is not confined to answering just one type of research question but can answer both quantitative and qualitative questions as well as those that involve both forms of data in the one question.
  2. Using mixed methods can provide stronger inferences. Teddlie and Tashakkori (2009: 34) argue that mixed methods can utilize the strengths of different methods and offset any weaknesses these methods may have by themselves.
  3. Using mixed methods can identify any divergent findings that occur due to the use of both quantitative and qualitative methods. Such findings may arise due to the methods addressing different aspects of a problem which would not have been identified in a single method. Addressing such inconsistencies in mixed-methods research is dealt with in Chapter 16.
  4. Researchers can integrate findings from qualitative and quantitative methods in the one study, thereby providing more comprehensive information about the issue being researched.
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### AN OVERVIEW OF THE RESEARCH PROCESS

An overview is useful for gaining a broad perspective on the research process to see how the various components get put together. In particular, it helps identify when using mixed methods rather than a single method in a research project is appropriate.

A research project can be divided into the following stages:

- Choosing the research topic
- Reviewing the literature on the topic
- Formulating the research questions to be answered
- Deciding whether the research questions can be answered by analysing existing (secondary) data or by collecting new (primary) data
- Deciding on the conceptual and theoretical framework to be adopted
- Choosing the research design
- Gaining funding for the project
- Gaining ethical approval for the study
- Selecting participants for the study
- Conducting the research project
- Undertaking the data analysis
- Reporting and communicating the findings from the research.

An illustration of these stages is provided in Box 1.6, which describes the design and conduct of a research project as part of an advanced undergraduate course in research methods at the

University of New South Wales supervised by the author. This example illustrates that steps 5 and 6 in particular are intertwined and a decision on step 5 was actually not made until after step 6 in this case.

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## BOX 1.6

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### AN EXAMPLE OF A RESEARCH PROJECT TO ILLUSTRATE THE STEPS INVOLVED IN THE CHOICE, DESIGN AND CONDUCT OF RESEARCH

1. Choosing the research topic: the general topic of road safety was set by the supervisor. The first meeting discussed areas of interest and the topic of road safety in school zones was chosen. School zones are areas in the immediate vicinity of a school. Sponsorship was then obtained from the state Roads and Traffic Authority (RTA).
2. Reviewing the literature: peer-reviewed journals and reports by Road Safety centres and agencies were accessed to provide a basis for constructing research questions.
3. Formulating the research questions: the aim of researching road safety in school zones was to find out to what extent drivers, parents and children observed safety rules in these zones. The list of research questions will not be reproduced here due to space requirements but they concerned the behaviour of drivers, parents and children during the operation of the zones (morning and afternoon when schools start and finish) and the views of these groups along with teachers about the effectiveness of the operation of the zones.
4. Deciding whether the research questions can be answered by existing data or not. Since there were no studies on the operation of these zones, primary research was indicated.
5. Choosing the conceptual and theoretical frameworks: this proved to be a difficult step due to the variety of viewpoints about such frameworks present in the group. Largely because a mixed-methods methodology was adopted in step 6, it was agreed that to combine both quantitative and qualitative data a post-positivist paradigm seemed to be most appropriate. No particular theoretical perspective emerged from the literature review.
6. Choosing the research design: a mixed-methods methodology was chosen since it was agreed that quantitative data was needed to document the extent to which traffic regulations were observed and qualitative data was needed on the views of parents and teachers on the effectiveness of the rules. The research methods to be used included an observational study of drivers, parents and children in the school zone. Mainly quantitative data was obtained, dealing with the extent to which safety rules were observed. Interviews were conducted with teachers and parents to gain their views about the operation of the zones and these interviews yielded the qualitative data.
7. Gaining funding for the research: the research was funded through teaching grants to the course. The Roads and Traffic Authority was prepared to provide funding but this was not needed.

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8. Gaining ethical approval: an ethics application was submitted to the university ethics committee and approval obtained.
  9. Selecting participants for the study: four school zones were chosen within the Sydney metropolitan area, two on main roads and two in side streets to ascertain any differences in observation of rules. Parents were interviewed as they arrived to collect their children and teachers were interviewed depending on availability.
  10. Conducting the research project: students were allocated to zones to collect data using an observational protocol to collect the observational data and an interview schedule to collect the interview data.
  11. Undertaking data analysis: quantitative data was analysed using SPSS on university computers and interview data was coded using NVivo.
  12. Reporting and communicating findings: students each wrote their own reports as part of their course requirements and the supervisor put together the best of the reports to compile a report for the RTA. Selected students presented the finding to a seminar at the RTA offices after the course was completed.
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These stages will be outlined in detail throughout this book.

## CONCLUSION

This chapter has explored the nature of social research and outlined the emergence of mixed methods as a way to overcome the paradigm wars and combine the benefits of qualitative and quantitative methods in the one study.

At this stage, the notion of paradigms and paradigm wars has been introduced in a preliminary way to explain why mixed methods emerged as a reaction against the seemingly entrenched oppositions between positivists on the quantitative side and interpretivists and constructivists on the qualitative side. More details are provided in Chapter 3 where paradigms for mixed-methods research are discussed.

## CHAPTER SUMMARY

The social sciences use a range of research methods to advance knowledge in their respective areas. These methods may be either qualitative or quantitative or a mixture of both. In the latter case, the approach is called mixed methods.

Social research can take on a variety of forms. The three main forms of research are: basic research, which is conducted to expand knowledge in an area; strategic research, which is conducted to investigate areas of special interest to government policy; and applied research, which is conducted to solve practical problems.

There are also three main goals of social research: exploration, description and explanation. Exploratory research opens up new fields about which little is known; descriptive research aims to provide a picture of the main features of a field of study; and explanatory research aims to answer 'why' questions or to test theories about the social phenomena under investigation.

Quantitative research tended to dominate the social sciences until the latter part of the 20th century until qualitative researchers challenged its legitimacy as the main research methodology. This led to a period referred to as the 'paradigm wars' where each side attacked the assumptions and methods of the other. The emergence of mixed methods effectively ended this conflict and heralded a new era of social research where both quantitative and qualitative methods could be integrated to provide a unified approach to research.

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## FURTHER READING

Creswell, J. W. and Plano Clark, V. L. (2011) *Designing and Conducting Mixed Methods Research*, 2nd edition. Thousand Oaks, CA: Sage Publications.

This is the second edition of a pioneering text on mixed methods. Chapters 1 and 2 cover in more detail the background to mixed methods than has been included in this chapter.

Neuman, W. L. (2011) *Social Research Methods: Qualitative and Quantitative Approaches*, 7th edition. Boston, MA: Pearson Education.

This is a widely used introductory text that provides some useful material in Chapters 1–4 on the contents of this chapter.

Reichhardt, C. S. and Rallis, S. F. (eds) (1994) The qualitative–quantitative debate: New perspectives. *New Directions for Program Evaluation*, No. 61. San Francisco, CA: Jossey-Bass.

This is a useful collection of early articles on the quantitative–qualitative debate as it related to the field of evaluation. It predates the emergence of mixed methods but many of the articles advocate combining these methods.

Schoemaker, P. J., Tankard, J. W. Jr. and Lasora, D. L. (2004) *How to Build Social Science Theories*. Thousand Oaks, CA: Sage Publications.

This book provides a very systematic approach to theory building and testing in the social sciences, a topic that was only touched on briefly here in the discussion of explanatory research.