Research Methods

Unit 1 The Nature of Research

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Unit Overview

The main focus of this unit is on what is meant by policy and management research. This is argued to be a form of social research – about the relationships between people and the social world. In studying this you will explore the importance of theory in research and look at some vital questions that underpin the practice of social research: what is social reality, what is acceptable knowledge about social reality and how should we conduct research on social reality? These are philosophical questions of ontology, epistemology and methodology, and you will learn what these terms mean and why it is important for researchers to understand the debates associated with each.

Learning outcomes

When you have completed your study of this unit you will be able to:

- explain what research is generally, and in relation to policy and management more specifically
- outline the difference between pure and applied research and the relationships between research and theory
- identify and explain ontological concerns in relation to social research, and the difference between objectivism and constructivism
- identify and explain epistemological concerns in relation to social research, and the differences between positivism and interpretivism
- discuss the main differences *and* the relationship between ontological and epistemological concerns and how these relate to methodological issues
- set out the main features of the debate about whether quantitative and qualitative research approaches are epistemological or technical matters.

Reading for Unit 1

Martyn Denscombe (2021) Chapter 12 'Grounded theory'. *The Good Research Guide: For Small-Scale Social Research Projects*. 7th Edition. London: Open University Press. pp. 154–66.

Lesli Hoey (2017) 'Reclaiming the authority to plan: How the legacy of structural adjustment affected Bolivia's effort to recentralise nutritional planning'. *World Development*, 91, 100–12.

Michael Dickmann, Noeleen Doherty, Timothy Mills and Chris Brewster (2008) 'Why do they go? Individual and corporate perspectives on the factors influencing the decision to accept an international assignment'. *The International Journal of Human Resource Management*, 19 (4), 731–51.

1.1 What is Research – Pure and Practical?

Research is about exploration, discovery and explanation. Howard and Sharp (1983) define research as 'seeking through methodical processes to add to one's own body of knowledge and, hopefully, to that of others, by the discovery of non-trivial facts and insights'.

Research is most often classified or labelled by fields of study such as engineering, life sciences, physical sciences, the humanities and social sciences, and these fields of study consist of a number of disciplines. Research about policy and management largely falls into the category of social sciences, for when we study policy and management concerns, we are usually studying people and institutions and the relationships between them.

Management research by academics has developed into a series of specialisms, with over 700 periodicals publishing research results in the English language alone. The specialisms can usually be categorised as one of the following three types:

- sector-based, including the public sector
- discipline-based, including psychology, economics, mathematics
- functionally-based, including finance, marketing, operations research, human resource management, manufacturing, supply-chain management.

If there is a common theme it is the search for approaches and techniques that produce better results. Simple mistakes in research method can produce damaging results. A famous example of academic anthropological research should stand as a warning to anyone planning a research project. The junior anthropologist Margaret Mead spent several years in Samoa talking to teenage girls about their sexual experiences while they were growing up. A famous book, *Coming of Age in Samoa*, started a very successful career for Mead and became an important source of anthropological knowledge. Unfortunately, the stories she collected from the girls were made up, as was discovered by a later researcher, Mr Derek Freeman of New Zealand. The girls had no intention of revealing their behaviour to a stranger and had great fun fooling her. The lessons for other researchers are chilling:

- you must find ways of checking whether people are telling you the truth
- you must understand the culture and beliefs of the people you are researching;
- you can convince people that what you have discovered is true, even when it is not.

Avoiding such mistakes requires solid and reliable research methods.

In studying this module, you are probably either aiming to complete an academic dissertation for your MSc, or to undertake some form of research in your professional role. Both types of research are covered in this module, and are discussed briefly below.

1.1.1 Academic research

Research for academic reasons may be undertaken as part of a course of study such as an undergraduate or a postgraduate degree or a professional qualification, or as part of an academic job. Typically, academic research is a 'fact-finding' exercise to establish the current state of research on a topic, to review existing knowledge, or to advance theoretical knowledge about something by developing pure theory or testing existing theory. You will probably have studied the nature of theories in previous courses: they are sets of propositions, logically and systematically interrelated, aimed at describing and explaining relationships between things or events – typically, what *causes* what.

To meet the requirements of academic degrees and academic careers, most academic research aims to expand the existing body of knowledge and understanding – concerned with developing theoretical explanations for why something is a problem rather than with exploring possible solutions to a problem. Academic research that is concerned with developing and testing theoretical propositions is often called '*pure research*'.

1.1.2 Practical research

In contrast, research can be undertaken for practical reasons – to find a practical solution to a specific problem or to develop a practical understanding of a particular situation. This type of research is called '*applied research*' and is characterised by the likelihood that the results of the investigation will be used as the basis for some kind of action, such as policy formulation or developing managerial strategies.

A great deal of policy and management research is applied research, and there is a growing number of institutes whose primary concern is to undertake policy-related or applied research in relation to general social problems. Many of these specialist applied research institutes can be found in the university sector; many others are independent organisations, and they frequently undertake work on behalf of research foundations, public-sector organisations and government departments.

The major aim of this applied research is to investigate why a problem is seen as a problem in the first place and then to find practical solutions to it. To do this, applied social policy research aims to locate the research question or problem in its broader social context and then, through empirical investigation (observation of the problem to see how what is actually happening) and evidence, to seek answers and solutions that may enable the problem to be solved. The notion of 'empirical' investigation and evidence is derived from the philosophical doctrine of 'empiricism', which argues that the only acceptable form of knowledge is knowledge that has been gained through experience, observation and the senses, and that has been rigorously tested and scrutinised.

Applied research is often undertaken inside organisations, usually by managers, other staff or by external consultants at the request of managers.

Typically, the research aim is to seek solutions to problems and to recommend workable strategies for solving the problem or to improve what the managers regard as organisational efficiency and effectiveness. Defining the scope and nature of the problem or question requires it to be located and understood in the wider organisational context in which it is embedded and, as in pure research, here too theory often plays a vital role in explaining underlying causes of problems in organisations.

So, pure and applied research can represent the extreme points of a continuum. However, they do not have to be mutually exclusive. Although there are distinct differences between the two and research is often solely concerned with one or the other, there is much research undertaken for academic reasons that is also concerned with seeking practical solutions or understandings and contributes to knowledge in both theoretical and practical ways. And, of course, there is a great deal of applied research that contributes to the development and testing of theory as well as attempting to provide a workable solution to a problem. In fact, recent debate within the British Academy of Management has highlighted in particular the desire that management research on practice should inform theory that, in turn, informs practice (Saunders *et al*, 2000).

By now you will have noticed that when we talk about research, we also talk about theory. This is because theory occupies an important role in research, and understanding the relationship between research, theory and data is essential for all serious researchers. We will discuss this relationship in the following section.

Reading 1.1

For an introduction to the kinds of research issues discussed in this unit, turn to Denscombe (2021), *The Good Research Guide*, and read Chapter 12, which covers examines the relationship between research, the analysis of data and theory.

Denscombe (2021) Chapter 12 'Grounded theory' in *The Good Research Guide*. pp. 154–66.

1.2 The Relationship between Theory, Research and Data

The role of theory in social research is crucial. The endeavour of social research is to connect empirical evidence (data) about the social world and theory, because theory provides explanations and understandings about the social world, its constituent parts and the relationships between them. Exploring existing social theory makes us more aware of and sensitive to the extent and limitations of our knowledge about the social world and to the possibilities and needs for further social investigation. In turn, this helps us to formulate our research topics, to devise more insightful and penetrating research questions and to design better research.

Social research can involve testing theory, developing theory, applying existing theory to new areas and phenomena to try to explain and understand them, or using theory to make predictions about social behaviours or situations. The relationship between *theory* and *data* is two-way:

- theory can be used to guide and inform the formulation of research questions and the collection and analysis of data, and this use of theory is known as *deductive research*
- theory can evolve and develop *from* the data either after the completion of data collection and analysis or while data collection and analysis is still in progress, and that use of theory is known as *inductive research*.

1.2.1 Deductive research

The process of deductive research is often associated with *quantitative*[1] research and involves starting out with a theory. The theory is used to set up a *hypothesis* – that is, a specific expectation or implication deduced from the theory about the type of data that should be found. A hypothesis is a tentative and speculative statement, informed by theory, about the possible relationship between two or more *variables*.

You have met variables before in your studies, and will know that a variable is a characteristic or property or attribute or phenomenon. Variations in one variable (called the *independent variable*) are taken as predictors, influences or causes of variations in the other variable (called the *dependent variable*). A typical way to phrase a hypothesis is by using an *if–then* format

- *if* the independent variable does 'x', *then* the dependent variable will do 'y'.

But a hypothesis does not have to be as explicitly formatted as this. For example, our hypothesis might be, 'increased unemployment leads to increased crime' or 'the higher the rate of unemployment in a community, the higher the percentage of community residents who commit crimes'. In other words, we are hypothesising that *if* unemployment increases, *then* the incidence rate of crime will increase. The *independent variable* is the increased unemployment and the *dependent variable* is the percentage of community residents who commit crimes.

After one or more hypotheses have been formulated, the researcher can then collect data with which to test them. It is the hypotheses that are tested by the researchers, not the entire theory. The collected data may support or not support the hypotheses. The point is to subject the hypotheses to rigorous testing, which requires the researcher to collect empirical evidence about the social world and then to make analytical statements about what the data indicate and what this means for the theory that is being used.

[1] Quantitative research typically emphasises counting and measurement. Quantitative methods are designed to standardise data for quantification and measurement, and employ the use of statistics.

1.2.2 Inductive research

In inductive research, theory is initially used to inform the development of the central research question(s), but the idea is not to 'test' theory in the way it is set up and tested in deductive research. Rather, the intention is to collect data about the central research concerns and to develop theoretical ideas from the data. Whereas deductive research is characterised by *theory* and hypothesis *driving the collection of data*, inductive research is characterised by *data driving theory development*.

Inductive research is generally associated with *qualitative* research, which typically emphasises *words* rather than quantification and measurement. Qualitative research methods are geared to social context and designed to capture social life and meanings as experienced by participants. This type of research begins with observations and findings that are then used to develop (induce) a general explanation, or theory, that accounts for the data. Theory is the *outcome* of inductive research and emerges out of the data.

In inductive research, questions or problems are less likely to take the form of an if-then hypothesis, and research questions may even be as open as, 'what is it like to be a homeless person?' The point in inductive research is to analyse the data by seeking recurring patterns, themes or topics in the data and to identify generalisable, typical features and properties of the data. Once this is done the researcher can begin to develop theory to explain these findings. Following this, he or she may repeatedly collect more data to 'ground' the developing theory. This means collecting more data to establish whether and to what extent the developing theory is accurate and applicable in different circumstances, and is known as a process of *iteration*. Iteration is a step-by-step process of analysis, painstakingly applying a set of data to different related questions or repeating the questions with different data.

The amendment of theory

While these descriptions of deductive and inductive research are of pure forms of each research approach, in practice the distinction between them and the steps in conducting each approach are often not so clear-cut. There are elements of induction in the deductive approach and elements of deduction in the inductive approach.

As Bryman (2008) points out, although the sequential steps in deductive research do occur, it may be the case that after analysing the data the researcher's view of the theory changes; or it is not until after the data have been analysed that the relevance of a set of data for a theory becomes obvious; or perhaps the researcher will need to re-evaluate their theoretical views as a result of the publication of new theoretical ideas prior to the researcher producing their own findings.

Then, if it is necessary to amend the theory as a result of the findings from testing hypotheses, the researcher feeds back their findings into the stock of existing knowledge to revise the theory: this is an inductive process. In induction, the iterative process of grounding theory in data to establish its

accuracy under different conditions is similar to testing hypotheses in the deductive approach – reflections are made about the data and tentative theoretical statements are made about what the data indicate, then more data are collected in order to test out these theoretical ideas.

Asking the research question

Before the researcher can decide whether to use an inductive or deductive approach and consider whether the research will be pure, applied or somewhere along the pure–applied continuum, the specific research question must be clearly identified and the research aims must be defined. *Until this is done, the researcher cannot begin to make decisions about how to carry out the research* – such as choosing appropriate research strategies and methods of data collection. The principal aim of this module is to enable you to choose a research strategy appropriate to your research question, and this is why you will be studying a wide range of strategies and their theoretical bases.

Thus, formulating a research question and deciding which strategies and methods to use are not simply matters of choosing a question of importance or interest and learning about research strategies and methods and how to implement them. The formulation of research questions and the ways in which social research is conducted are related to different philosophical perspectives on what social reality is, what is regarded as acceptable knowledge in the social sciences, and how social reality should be studied. These are questions of *ontology* and *epistemology* and we will now turn to what these questions mean for us as social researchers.

 **Reading 1.2 Case Study**

Hoey (2017) 'Reclaiming the authority to plan: How the legacy of structural adjustment affected Bolivia's effort to recentralize nutrition planning'. *World Development.*

Now read 'Reclaiming the authority to plan' by Hoey (2017). We will use this article at various points in the module to illustrate sampling methods, case studies and validity.

 When you have finished reading, and writing your notes, please answer the following questions:

1. Where did the research question originate?
2. Is the research deductive or inductive?
3. Is the research quantitative or qualitative?

We will return to this paper later and ask more questions about the validity of its methods.

1.3 Quantitative and Qualitative Research Methods in Social Research

To begin this discussion, let us first be clear about what the terms *methodology* and *methods* mean. Methodology is the study of methods. It addresses the theoretical arguments and justifications for methods and is founded in the epistemological and ontological arguments about what social reality is and how we can gather data about it. Methods are located within these

theoretical arguments and justifications. They are the techniques or tools for collecting data, and different types of methods collect different types of data.

Similar to previous debates that we have discussed in this unit, a fundamental distinction about research occurs in the methodology and methods debate, too. Here, the basic distinction is about *quantitative* and *qualitative* research and what each entails.

1.3.1 The quantitative–qualitative debate

As was suggested earlier, it would seem logical to suppose that if we followed a particular ontological and epistemological position we would also be committed to designing research in a particular way and to using either quantitative or qualitative data collection methods. So, when we choose to use different data collection methods, we must recognise their epistemological implications. Indeed, this fundamental contrast between qualitative and quantitative research, based on the differences between their epistemological foundations, is exactly the view of some researchers and writers on methodology.

However, other researchers and writers on methodology regard this contrast between quantitative and qualitative research as misleading and even incorrect. They argue that the distinction between quantitative and qualitative methods is a technical matter and the choice of which methods to use should be determined by the research question or problem and how appropriate the method is to investigate it. For example, qualitative research is usually associated with induction and theory generation, but qualitative research is frequently undertaken in order to test theories rather than to generate them.

Many thinkers now argue that the epistemological distinction between quantitative and qualitative research should be relaxed. There is growing interest in the combination of the two approaches and the argument that combined approaches will produce a more rounded picture. In any case, elements of both are required in some research methods: the analysis of interview or group discussion data may include attempts to find significance in differences; the process of defining categories to measure in a quantitative study may require qualitative work. As you progress through this module, you will choose between the 'qualitative' and 'quantitative' options in Units 5A and 5B. In practice, when you are conducting research you may have to cross from one to the other.

Reading 1.3 Case Study

Now study 'Why do they go? Individual and corporate perspectives on the factors influencing the decision to accept international assignment' by Dickmann *et al* (2008).

Dickmann *et al* (2008) 'Why do they go? Individual and corporate perspectives on the factors influencing the decision to accept an international assignment'. *The International Journal of Human Resource Management*.

Read the first seven pages of the article paying particular attention to the section on methodology, which you should be able to do quickly, then answer this one question:

- What is the relative importance of the qualitative and quantitative elements of the research?

In answering this, you might consider whether the conclusions would be as valid if only one of the methods had been used.

1.4 Objectivity and Reflexivity

Some commentators argue that use of the term social 'sciences' to refer to the study of human behaviour in the social world is misleading. In part, this is due to its associations with the physical science model of research, which is, as we have seen in this unit, a highly contested model in terms of its suitability for researching social reality. Sometimes the term social 'studies' is used in preference to social science.

However, it is important to have a 'scientific attitude' towards social research, no matter what definition of science is held. Research should be carried out in a systematic, sceptical and ethical manner in which all aspects of the research are explicitly identified and described, are available for scrutiny by others and are carried out in a way that ensures that the interests and concerns of research participants are safeguarded. A researcher, KF Punch (1998) suggests a conception of the scientific method in which real-world data and the role of explanatory theory are central. He argues that it is scientific to collect empirical data and to build theories to explain that data and then to test these theories against further data. In this definition of science, it is irrelevant whether theory comes before data or data before theory. What is relevant is that both theory and data must be present for the work to be considered scientific. Nor is it a requirement of this definition of science that the data should be numerical or involve measurements. Empirical data can be non-numerical.

Of course, these ideas do appear to stem from traditional conceptions of objectivity in scientific work, and as we have discussed in this unit, criticism has been levelled at this traditional conception as an idealisation and refinement of what actually goes on in scientific research. Like scientific research, how social research is conducted is also, of course, influenced by the personal orientations of the researcher (Bryman, 2008). If the research is 'researcher-originated' – that is, designed by the researcher to meet his or her own interests, ideas and skills – then the research can be influenced by the researcher's personal values or beliefs at any point in the process of conducting the research. For example, personal beliefs and values influence the choices and decisions the researcher makes about the following:

- area or topic to be researched
- formulation of research questions and objectives
- overall design of the research
- the methods used to collect data and how they will be implemented
- how the data will be analysed and interpreted
- how the research results, findings, conclusions and recommendations will be written up and presented.

Source: adapted from Bryman (2008) p. 22.

If the research is commissioned or 'customer-originated' research in which the research question or problem is identified by someone other than the researcher, who then pays the researcher to conduct the study, the personal beliefs and values of the researcher are still influential in the conduct and presentation of the research. Indeed, both the researcher and the commissioning agent may find it necessary to 'negotiate' the research design and content of presentation until both parties are satisfied.

It is often the case that particular personal beliefs and feelings of the researcher develop during the course of the research. For example, at the outset of the research the researcher may have had little or no contact with the people being studied. But as the research progresses, researchers may develop an affection or an affinity or sympathy or even an aversion or repulsion towards the people being studied, which can then influence their perception of what they are seeing and how they see it. Further, it can often become difficult for the researcher to recognise and to disentangle biases and assumptions from their personal feelings, and to maintain an objective, impartial, value-neutral stance as a social scientist (Bryman, 2008).

Indeed, the view that research can be objective, value-free and unbiased is increasingly challenged. Many research practitioners now emphasise the importance of *reflexivity* in research. This means that researchers should strive to be self-reflective and to recognise, acknowledge and be open about their personal biases and assumptions in the research in order to ensure that readers of the research are clearly aware of them and how they may have influenced the research.

So, what can we make of these final comments about science and objectivity in social research?

The important point is that whether research is about social reality or the physical world there is no one position on doing the research that is unchallengeable. But if the enterprise of research is to produce enlightening, legitimate and trustworthy knowledge, then it requires the reflective, rigorous, systematic and ethical collection of data, data that is explained by building theories and testing theories against further data. The remaining units of this module will focus on the practical processes of research, and how they relate to the type of research undertaken.

You now know that there are different types of research and different philosophies that inform the research process. You are ready to start thinking about planning and designing your research, which will be discussed in Unit 2.

Glossary

Table 1.1

Data	Empirical evidence; information acquired.
Deduction	An approach that involves starting out with a theory – reasoning from a general idea to particulars; often associated with quantitative research.
Empiricism or empirical investigation	Investigation based on observation, experience or experiment rather than on theory.
Epistemology	The philosophical study of the nature and basis of knowledge – what is knowledge, and how do we know what we claim to know?
Hypothesis	A tentative and speculative statement, informed by theory, about the possible relationship between two or more *variables*.
Induction	An attempt to derive theory from data: mainly associated with qualitative research – that is, reasoning from particular ideas to a generalisation.
Interpretivism	Research used to search for meaning as defined by the subjects of the research.
Objectivism	A philosophical position that argues for the independence of worldly phenomena from the observer, and the need to examine the world from a value-free perspective.
Positivism	The 'scientific method' of formulating hypotheses about phenomena and testing them with standardised procedures and data-gathering methods – usually quantitative data, associated with deduction and objectivism.
Qualitative research	The use of exploratory and often unstructured methods to examine social issues; associated with induction and interpretivism.
Quantitative research	The use of objectivist and deductive methods, relying on hard provable (usually mathematical or statistical) data, largely associated with the physical sciences.
Theory	An explanation of the relationship between constituent factors of a phenomenon; an account of what causes what or how something arises – the relationship between variables.
Variable	A characteristic or property or attribute or phenomenon. Variations in one variable (called the *independent variable*) are taken as predictors, influences or causes of variations in the other variable (called the *dependent variable*).

References

Abercrombie N, S Hill and BS Turner (Eds.) (1994) *The Penguin Dictionary of Sociology*. London, Penguin Books Ltd.

Bryman A (2008) *Social Research Methods*. 3rd Edition. Oxford UK, Oxford University Press.

Denscombe M (2021) *The Good Research Guide: For Small-Scale Social Research Projects*. 7th Edition. London, Open University Press.

Dickmann M, N Doherty, T Mills and C Brewster (2008) 'Why do they go? Individual and corporate perspectives on the factors influencing the decision to accept an international assignment'. *The International Journal of Human Resource Management*, 19 (4), 731–51.

Freeman JD (1983) *Margaret Mead and Samoa*. Cambridge MA, Harvard University Press.

Gill J and P Johnson (2010) *Research Methods for Managers*. 4th Edition. London, Sage.

Howard K and JA Sharp (1983) *The Management of a Student Research Project*. Aldershot UK, Gower Publishing Company Limited.

Hoey L (2017) 'Reclaiming the authority to plan: How the legacy of structural adjustment affected Bolivia's effort to recentralise nutritional planning'. *World Development*, 91, 100–12.

Mead M (1928) *Coming of Age in Samoa*. New York NY, William Morrow.

Moore N (2000) *How to do Research*. 3rd Edition. London, Library Association Publishing.

Punch KF (1998) *Introduction to Social Research Methods*. London, Sage Publications Ltd.

Robson C (2002) *Real World Research*. 2nd Edition, Oxford UK, Blackwell.

Saunders M, P Lewis and A Thornhill (Eds.) (2000) *Research Methods for Business Students*. 2nd Edition. Harlow UK: Financial Times Prentice Hall.