1 Research, 'paradigms' and ethics

What will you learn from this chapter?

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This first chapter examines what research is and describes some different types. It guides you towards choosing an appropriate kind of research for your own project. We also consider 'paradigms' – the different kinds of thinking which underlie research activity – and 'ethics', a very important theme which we will regularly discuss in this book. Finally, I encourage you to feel positive about the challenge of doing your investigation, and highlight what you will gain from it.

What is research?

Research is all around us – we do it in our daily lives all the time:

- Before we go shopping, we look in cupboards to find out what we need to buy.
- When we want to give someone a present, we ask friends or family what that person might like to receive.
- When we want to study on a course, we examine possibilities on the Internet before deciding which one to apply for.

We rely on more formal research for organizing and improving human activity:

- We rely on medical research to make sure that medicines are safe and effective.

- We rely on consumer research so that what we want to buy is available in the shops.
- We rely on social research for planning the growth of our institutions and services.

With this range of types of research, the notion of research itself is not easy to pin down. Sharp (2009: 3) defined it simply as 'finding things out' and Mukherji and Albon (2010: 10) as 'seeking information to answer the questions that we pose'. Here is my definition:

> 🔑 **Key Points**
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> Research is purposeful investigation, aimed at finding out things we did not know before.

Rather than one single definition, however, it is more informative to draw up a series of statements which describe research at various levels:

1 At its simplest:
   - research is a planned investigation, carried out in an organized and systematic way
   - it produces information (called 'data') which, when analysed, tells us things we did not know or were unsure about before
   - when applied to practice, this new understanding may influence what we do.
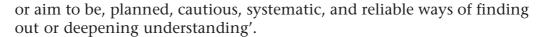2 Thinking further, research involves:
   - asking questions at the start of the investigation
   - collecting data, then using these data to answer the questions.
3 At a third level, research also involves:
   - connecting the investigation to what is already known about its topic
   - looking carefully and critically at how we collect information, to see if we can trust what it tells us
   - presenting what we find out in clear, precise and persuasive ways, so that others can learn more or gain better understanding of the topic we have investigated.

We can continue constructing levels to describe what research is about. The more we have, the closer we are to the kind of academic research which you should be aiming for in your project. Blaxter et al. (2001: 5) summarized it well more than a decade ago: '[All types of research] are,

or aim to be, planned, cautious, systematic, and reliable ways of finding out or deepening understanding'.

Research is also often seen as a formal aspect of educators' 'reflective practice'. Being 'reflective' means thinking hard about what you do, assessing its value and working out how things might be done better. It is helped by 'competence in methods of evidence-based classroom enquiry' (Pollard, 2008: 14), that is, an understanding of how to do research. This allows practitioners to adopt more structured approaches to appraisal of practice, to take into account what other investigations have found out, and to think more rigorously, relying more on evidence and less on impression and anecdote.

Activity 1.1   Understanding 'research'

Bring up a thesaurus on your computer:

- In Microsoft Word, press Shift + F7
- With Apple, press ctrl + alt + cmd + R
- Or use http://thesaurus.com

Type the word 'research' in the Search box, and press Enter. See what other words come up. Click on these words to find further associated terms. What do all these words tell you about the meaning and features of 'research'?

Categorizing research

We can categorize research in many different ways. For instance, it is carried out at different levels: undergraduate, practitioner, Masters, doctoral and post-doctoral. It may be funded by an external body, including government, or not have any allocated financial support at all. It can also relate to a wide range of themes, including (of course) education.

Educational research investigates learning, curriculum and educational practice. It can be carried out by practitioners or by 'outsiders' (and even by children and school students themselves). It may achieve many things – your project may achieve these too. For example, it can:

- strengthen understanding of how centres, schools or colleges function and how they might function better
- deepen understanding of educational practice, in the classroom and elsewhere

- explore the feelings ('perspectives') of those in education about curriculum, styles of teaching and about learning itself.

It also comes in different forms. Here are some common approaches, together with examples of each:

Theoretical research

Theoretical research scrutinizes concepts and ideas (such as equality and justice), rather than their practical application.

Example: *Starting his discussion with: 'Teachers often shut their students up', Callan (2011) examined the tensions between the silencing of students' derogatory comments and the ideals of free speech.*

Action or practitioner research

Action research investigates everyday actions, in work or in our social lives, with a view to improving systems and practice. It is often carried out by practitioners, such as teachers. Participants themselves may also have direct input into design and monitoring of the investigation (sometimes known as 'participatory' research).

Example: *Rule and Modipa (2011) explored the educational experiences of adults with disabilities in South Africa. The study's participatory, action-research approach involved people with disabilities designing and conducting the investigation. The study was also an example of 'emancipatory research' which challenges social oppression of marginalized groups.*

Evaluative

Evaluative research assesses the usefulness or effectiveness of an organization or activity, possibly to indicate whether this should be continued.

Example: *Blenkinsop et al. (2007) evaluated the School Fruit and Vegetable Scheme, which provided fruit to young children in English schools every morning. They found that children's fruit consumption increased, but saw no wider or sustained impact on their diet.*

Experimental

This involves a structured experiment. Situations are carefully organized, so that different scenarios can be investigated. For instance, two student groups (one 'experimental', the other 'control') are taught the same thing in different ways. The researcher then tries to determine which approach is more beneficial. To adopt this approach, it must be possible to measure clearly the issue in question.

Example: *Finnish research by Iivonen, Sääkslahti and Nissinen (2011) used two groups of young children to study the effects of an eight-month, pre-school, physical-education curriculum.*

'Cause and effect' research

Experimental research is usually associated with what I call 'cause and effect' research – trying to find out if and how one thing causes or affects another. For instance, does a particular teaching approach, initiative or resource improve students' learning and achievement?

Example: *Blatchford et al. (2011) studied over 8000 students to examine the effects of work by education support staff. Uncomfortably for educators, it found that the students getting most support tended to make less academic progress than similar students with less support.*

Case study

Case-study research involves in-depth investigation of an individual, group, event or system, usually within its real-life context and sometimes over a period of time (called a 'longitudinal' study).

Example: *Forrester (2010) used a longitudinal case-study approach to document the musical development of one child between the ages of 1 and 4 years.*

Systematic review

Systematic reviews critically appraise a range of research evidence or literature (or both) on a particular topic. From the analysis, it identifies key messages and continuing gaps in understanding.

Example: *Sebba et al. (2008) searched electronic databases and journals to find and review 26 published research studies relating to the topic of self and peer assessment in secondary schools.*

Exploratory

Exploratory research seeks to understand situations more clearly and deeply than before, often from varied perspectives.

Example: *Rassool (2004) explored ways in which children from minority ethnic groups viewed themselves culturally and educationally within British society.*

Comparative

Comparative research investigates two or more different situations, for instance practice in different countries or institutions, and makes comparisons in order to understand both situations better.

Example: *Jerman and Pretnar (2006) compared the musical abilities of 11-year-old children on the Caribbean island of Martinique and in Slovenia. This comparison identified common elements and some differences which seemed to explain much better results on Martinique.*

Grounded theory

This approach is often used to create or produce an overall theory from wide-ranging investigation, often culminating in an intricate flow chart or diagram. The approach was first formulated by Glaser and Strauss (1967).

Example: *Thornberg's (2008) grounded-theory research in Sweden developed a categorized system of school rules and sought to explain the logic behind them.*

Ethnography

Ethnographic research studies cultures or groups in naturalistic contexts, 'understanding things from the point of view of those involved' (Denscombe, 2010: 80–81). Ethnographic researchers often immerse themselves in the lives of those they are researching.

Example: *Tang and Maxwell (2007) used observation, interviews, daily conversations and questionnaires to investigate cultural features of the Chinese kindergarten curriculum, finding that 'children are taught to learn together rather than explore individually' and that children's 'spontaneous learning interests are welcomed but seldom developed in depth'.*

> ### Activity 1.2   Types of research
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> Find a research journal in your library or research reports on the Internet (see the further reading at the end of this chapter for a possible source). Scan the articles and identify what kind of research has been carried out.
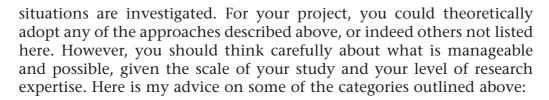
Choosing your type of research

The categorization above is not definitive – research can be described in different ways. Compare my list, for instance, with that provided by Walliman (2011: 8–21), or in other books about research. Different approaches may also be combined. For instance, cause-and-effect and experimental research are closely connected; action research can be ethnographic in nature; exploratory research may be associated with a grounded-theory approach and can be comparative when two or more

situations are investigated. For your project, you could theoretically adopt any of the approaches described above, or indeed others not listed here. However, you should think carefully about what is manageable and possible, given the scale of your study and your level of research expertise. Here is my advice on some of the categories outlined above:

Theoretical: Researching ideas is not straightforward – it involves scrutinising ways of thinking and writing analytically about them. It is not usually an appropriate option for beginner researchers.

Action or practitioner research: Many reading this book will be close to the action of the classroom in one way or another. It is likely that you wish to use your research to strengthen understanding of educational practice, and therefore your approach may well be of this kind.

Evaluative: Evaluative research usually involves judging the quality of educational practice and being ready to make objective, critical comment. This may be difficult or inappropriate to do, especially if you are a student on work placement or teaching practice.

Experimental: To carry out an experiment you will need to set up two or more research environments, for instance two similar groups of children taught in different ways. You will need to control other factors (these are called 'variables') – for example, the material being taught and physical environment – so that the teaching approach you are investigating is as far as possible the only difference between the groups. This is usually beyond the scope of undergraduate researchers, although it may be feasible for a practising teacher who is able to organize groups in this way. Note that because of ethical concerns (which we start to examine below) one group should not be knowingly disadvantaged by your investigation.

Cause and effect: This is a tempting approach to take – most educators want to find out the impact of different kinds of educational work. However, this too is difficult. There are simply too many alternative explanations for any 'effect' that may be indicated by the investigation. It may, however, be possible to identify 'indications' or 'perceptions' of impact, rather than seeking confirmation or proof (we examine this possible approach when we discuss choosing your topic in Chapter 4).

Case study: The term 'case study' is used rather loosely to describe defined, small-scale research. More strictly, however, it is a specific research strategy, with its own underlying principles. If you think you will be doing a case study, consult relevant literature on this, for instance Yin (2009) and Simons (2009).

Systematic review: Most projects require students to undertake active collection of data 'in the field': observing, interviewing, using questionnaires,

and so on. A systematic review will not meet these requirements. If a review is possible, this should be stated in your course documentation. If in doubt, discuss with your project tutor.

Exploratory: Combining action research with an exploratory approach may be the most appropriate kind of project for the beginner researcher. You explore an aspect of educational practice to deepen your own understanding and inform that of others. Many examples in this book are of this kind.

Comparative: Take care if you decide on this kind of research. It doubles your work because everything you do in one situation you need to repeat in the other. Also be clear in your own mind why you are making the comparison. If you wish to determine which approach or situation is 'better' or 'more effective', then you are coming close to experimental research, described above, and the difficulties associated with it. Instead, you could use your comparison to strengthen an exploratory approach and achieve a fuller picture of the issue as a whole.

🔑 Key Points

In summary:

1 Check your course documentation to see if it stipulates what kind of research is required for your project.
2 If possible, discuss the nature of your research with your project tutor early in your course.
3 Make sure also that the type of investigation you choose will be manageable and appropriate for beginner research.
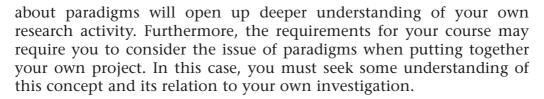

'Paradigms'

If you have already done some reading about research, you may have discovered that different kinds of investigation tend to reflect different research 'paradigms'. Perhaps you were rather mystified by what this meant. Sharp (2009: 5) agreed: 'It's all a bit tricky to the initiated never mind the uninitiated'.

The first thing about paradigms is not to lose sleep about them. As a beginner researcher, you can put together a coherent and useful research project without understanding paradigms much at all. Nevertheless, some awareness is worthwhile – you can appreciate icebergs by seeing what is above the water, but they are more interesting when you also understand what lies beneath. In the same way, knowing something

about paradigms will open up deeper understanding of your own research activity. Furthermore, the requirements for your course may require you to consider the issue of paradigms when putting together your own project. In this case, you must seek some understanding of this concept and its relation to your own investigation.

To start with, therefore, here are some definitions of the term in relation to research:

'Paradigms are models, perspectives or conceptual frameworks that help us to organize our thoughts, beliefs, views and practices into a logical whole' (Basit, 2010: 14).

'Paradigms reflect our underpinning assumptions about the nature of knowledge and the best ways of understanding the world around us' (Mukherji and Albon, 2010: 7).

My own definition is this:

🔑 Key Points

Paradigms are the conscious and subconscious beliefs which lie beneath the questions we ask and ways we carry out research, and which shape the kind of conclusions which emerge from our investigations.

Those definitions are not straightforward, so to understand them better, let us look at the two main paradigmatic 'schools' and some differences between them:

1. Positivist paradigm

Positivism is based on the idea that the world we are investigating has a stable and logical reality, and the purpose of investigation is to determine this and measure it. Human perception is not a reliable way of determining what this reality is – the researcher needs formal, systematic, 'truth-seeking' (Gray, 2009: 131) methods to find it out. A positivist paradigm is mostly associated with experimental and cause-and-effect research. It may also be called a 'normative' or 'scientific' paradigm.

2. Interpretivist paradigm

Interpretivism is different. Interpretivist (or 'naturalistic', or 'phenome-nological') researchers do not believe that there is an external reality

waiting to be discovered. Instead, they believe that what we accept as real arises from the different perceptions of different people, interacting with complex social and physical environments. Truth is socially 'constructed' – we decide (not always consciously) what it is – rather than existing independently of us. Research is therefore used to explore topics from various viewpoints (Gray, 2009: 31, calls it 'perspective- or opinion-seeking' research). An interpretivist researcher may build up several pictures of reality from those perspectives and put forward one or more possible interpretations or 'constructions' of an event or situation. In principle, another researcher could do similar research and produce a different construction, and if the research was well carried out, it could be as persuasive as the first.

As Gray (2009: 27) explains, therefore, the choice is 'whether the researcher believes there is some sort of external "truth" out there that needs discovering, or whether the task of research is to explore and unpick people's multiple perspectives in natural field settings'. There are other kinds of paradigms too, often adaptations or extensions of these two main types. Look out in your reading for 'pragmatism', 'feminism', 'post-structuralism' and others. There have been plenty of arguments about which is most appropriate – also look out for the term 'paradigm wars' to describe this vigorous debate. Fortunately, most researchers now take a more measured approach and may combine or integrate paradigms when undertaking research.

Your paradigm?

Paradigms, therefore, are about our view and understanding of the world. If you believe that reality is external to us and we can use formal research procedures to find out more about it, then you are likely to want to follow a positivist approach. You would collect 'firm' data – numbers and facts – for your investigation. If you believe that what is 'real' depends on how people perceive it, so that different 'realities' can co-exist, you are likely to want to follow an interpretivist approach. For your investigation, you would ask people about their experiences, beliefs and perceptions; you could also watch them working and interpret what you see.

In the end, you may find yourself drawing from both paradigms, combining collection of firm data with more flexible interpretation of experiences and perspectives. Whichever paradigm or paradigms inform your project, you may need to explain your standpoint when you write your project. So keep paradigms in mind and have a go at working out your own position if you can. This is especially the case when choosing your research methods in Chapter 7, as paradigms are a strong determinant of how you decide to do your investigation.

> 🔑 **Key Points**
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> In summary:
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> 1 Knowing something about paradigms will strengthen your understanding of research.
> 2 Check with your course literature and project tutor about the extent to which you should consider your own paradigmatic position when planning and writing your project.
> 3 Do not worry too much about this concept, however. It will become clearer bit by bit. The more it does so, the more you will appreciate the thinking which lies beneath it.

Ethics

For beginner researchers, consideration of paradigms may be optional, but consideration of ethics is not. According to Oliver (2010: 15), research should 'avoid causing harm, distress, anxiety, pain or other negative feeling to participants'; for Alderson and Morrow (2011: 3), 'research ethics is concerned with respecting research participants throughout each project'. My own definition includes you as the researcher in this perspective as well:

> 🔑 **Key Points**
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> Being 'ethical' means that your project does not bring harm or disadvantage to anyone who takes part, including yourself.

This sounds quite straightforward, but it is not. Often, what you want or need to do for your project is not desirable or appropriate for others. Here are some examples of the harm or disadvantage which your research could cause:

- **Disturbance**: Your investigation could interfere with the proper running of a class, or your wish to do interviews may disrupt a teacher's busy timetable.
- **Intrusion**: If you withdraw students for research work, they may miss an important lesson which will adversely affect their learning.
- **Secrecy**: If you keep secret from your participants what you are investigating, those participants may not realize the implications of what

they do or say. If they understood better, they may have preferred not to take part.

- **Embarrassment**: You may ask questions or make comments which cause embarrassment to your participants or to the organization where you are doing your research.
- **Lowering self-esteem**: Your research may highlight deficiencies or personal difficulties in your participants and lessen their status in front of colleagues, friends or you, the researcher.

Here too is one way in which your research may harm yourself:

- **Resentment**: In doing your research, you may ask too many personal questions, causing resentment amongst colleagues and adversely affecting your professional relationships.

As you may have realized already, you cannot avoid all such effects when doing research. Interviewing students, for instance, inevitably takes up time which they could be using for something else – however, this 'disruption' might turn out to be an interesting and beneficial break from routine. Some of the questions you ask could cause a degree of discomfort amongst your participants, but good research is often challenging, and most participants will recognize and cope perfectly well with this. Balance between investigation and the welfare of those taking part therefore needs to be found, with particular care taken if your research involves children, students and other potentially 'vulnerable' groups (see Chapter 9).

In the course of this book, therefore, we will discuss many aspects of ethics, such as confidentiality and anonymity, participants' 'informed consent' and your own professional behaviour as a researcher. We will find that 'ethical standards, high or low, weave into all parts of the research fabric and shape the methods and findings' (Alderson, 2004: 110). Oliver's (2010: 47) advice is vital: 'The principal matters, in an ethical sense, are that as researchers we take all reasonable measures to ensure the peace of mind, and fair treatment of the people we ask to help us with our research'.
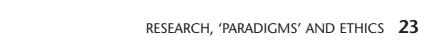
Codes

There are various codes and guidelines which will help you to recognize ethical standards in your research. For instance:

- **BERA (British Educational Research Association)** BERA's ethical guidelines (www.bera.ac.uk) are the most important for UK researchers. They stress participants' right to privacy, to be informed about the research to which they are being asked to contribute and to withdraw from the investigation if they so wish. From researchers, they call for openness and attention to cultural and other differences.

- **Policies**: Relevant principles and procedures will be outlined in the policies of your research venue, the centre, school or college where you carry out your investigation. These include those for health and safety, student behaviour, Internet use and professional conduct. It is your responsibility as a researcher to seek out what is relevant for your work and to have regard to such policies when carrying out your investigation.

- **Course code and 'ethical approval'**: It is also possible that your place of study has its own code or policies relating to ethical behaviour in research. Furthermore, you may need to apply for and get 'ethical approval' before commencing your investigation. We deal with this important procedure in Chapter 9.

Activity 1.3   Understanding ethical principles

Below are some key ethical principles, informed by Pring (2004). Choose one or more of these to discuss with your colleagues: What do the principles mean? What implications does each have for research practice and your own investigation? What tensions underlie them – to what extent can a researcher work to all these principles at the same time?

1   Show respect for everyone who is helping you, as well as for those who decide that they do not wish to be involved.
2   Be ready to explain and discuss your research, and respond constructively to criticism about it.
3   Respect confidentiality of data and the anonymity of those taking part.
4   Take responsibility for what you do and for its consequences.
5   Take steps also to avoid situations which may cause harm to yourself.
6   Pursue truth in your investigation, but be aware of the implications of this for others and be 'tentative and modest' (Pring, 2004: 149) about what you claim to have discovered.

Let's move on

Doing research is not an easy option, but will bring you plenty of benefits. It will give you, as Thomas (2009: ix) points out, 'a questioning disposition, about evidence and the frailty of knowledge, about methods of research and their strengths and weaknesses'. It will help you combine a

sense of independence with understanding of the views of others. It will mean you can grow as a reflective, constructively critical, motivated, even innovative member of the educational community as you progress in your work and career. Your project will be worth doing and worth doing well.

Are you persuaded? Even if you are, you are probably still uncertain about what you need to do to plan, develop and undertake a good research project. By working through this first chapter, however, you have made a useful start.

Later in this book, we will examine the steps of doing research one at a time. The next chapter and the optional task which follows in Chapter 3, however, look first at the process of research as a whole. What is your whole project like? What can you expect to achieve at the end of it? Let's move on.

Further reading

Koshy, V. (2010) *Action Research for Improving Educational Practice: A Step-by-Step Guide*. 2nd ed. London: Sage.
A well-ordered and clearly presented guide to action research, a type of investigation which you may relate to your own project.

Mukherji, P. and Albon, D. (2010) *Research Methods in Early Childhood*. London: Sage.
Part 1 examines the nature of paradigms and the two main types: positivism and interpretivism.

Oliver, P. (2010) *The Student's Guide to Research Ethics*. 2nd ed. Maidenhead: Open University Press.
A comprehensive and very useful introduction to research ethics. It includes examples of ethical dilemmas faced when doing research.

Pring, R. (2004) *Philosophy of Educational Research*. 2nd ed. London: Continuum.
This is a thoughtful (and very readable) philosophical discussion about educational research, which will deepen your understanding of the issues involved.

EPPI-Centre: http://eppi.ioe.ac.uk

The website of the Evidence for Policy and Practice Information and Co-ordinating Centre, part of the Social Science Research Unit at the Institute of Education, University of London. This site has systematic reviews on all aspects of education, providing an overview of many different kinds of research.