Chapter objectives

After reading this chapter you will be able to:

• Describe why research in the real world is of increasing importance.
• Explain the nature of theories.
• Outline the stages in the research process.
• Distinguish between inductive and deductive methods

This book is designed to introduce you to some of the essential methodologies, approaches and tools of research. In doing so, we will explore some of the philosophies and theoretical perspectives behind the many different ways of conducting research, as well as providing practical examples and guidance as to how research should be planned and implemented. Later in this chapter we will look at the structure of the book, but first we need to examine the nature of the research process and why research is being seen as increasingly important in a growing number of organizations and contexts.

The term ‘globalization’ is often used to describe a world that is becoming increasingly integrated and interdependent and where large, international organizations dominate. Within this globalized world, change in business and working environments has become rapid, pervasive and perpetual. Organizations have adapted to this uncertainty in a number of ways. One approach has been to understand (research) and develop relationships with both markets and supply chains. Most forward-looking organizations have also recognized the need for a multi-skilled and occupationally agile workforce. It has also required that organizations understand what motivates their workforce and how people embrace change. All this has had an enormous impact on the way organizations operate and interact with the ‘real world’, and how they communicate and work. Small and medium-sized enterprises (SMEs) have also had to modernize their organizational practices and to understand their working environment, as have public sector organizations (including hospitals, schools, colleges and universities) and voluntary organizations.
Faced with a more competitive, dynamic and uncertain world, a knowledge of research methods is important because it helps people in organizations to understand, predict and control their internal and external environments (Sekaran, 1992). It also means that those involved in commissioning or sponsoring organizational research are better placed to understand and manage the work of researchers and to objectively evaluate and interpret the outcomes of research. Hence, it becomes possible to calculate the potential risks and benefits in implementing research projects. But what do we mean by the term ‘research’?

**ORGANIZATIONAL RESEARCH IN THE REAL WORLD**

Research in this context is a ‘systematic and organized effort to investigate a specific problem that needs a solution (Sekaran, 1992: 4). Hence, organizational research is often about how (process) to solve real problems (content) (Gill and Johnson, 1997). This may have a very practical focus (applied research), with an emphasis on achieving measurable outputs that are specific to a particular organization. The results of such research may be of significance to that organization, but difficult to generalize elsewhere. On the other hand, organizational research may also be concerned with clarifying, validating or building a theory (basic research). Its importance to individual organizations may be determined by the extent to which this theory is translatable into a specific organizational context. However, most organizations will only see research as valid if it is seen to lead to practical outcomes (Easterby-Smith et al., 1991). Then there are forms of research comprising collaboration between the researcher and professional practitioners (action research). Table 1.1 provides a summary illustrating a continuum between basic and applied research.

Organizational research is not an easy option. First, there is no single subject called ‘organizational research’. It draws upon fields of inquiry such as sociology, anthropology, philosophy, communication, economics and statistics. This often means having to adopt an inter-disciplinary approach, incorporating ideas and approaches from a diverse range of subject backgrounds. Secondly, organizations are complex and the people working within them very busy, making it often difficult for the researcher to gain access to the people that can provide information. Key research sponsors, gatekeepers or stakeholders may also have their own

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**TABLE 1.1 BASIC AND APPLIED RESEARCH**

<table>
<thead>
<tr>
<th>Basic research</th>
<th>Applied research</th>
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<tr>
<td><strong>Purpose</strong></td>
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<tr>
<td>Expand knowledge of organizational processes</td>
<td>Improve understanding of specific organizational problems</td>
</tr>
<tr>
<td>Develop universal principles</td>
<td>Create solutions to organizational problems</td>
</tr>
<tr>
<td>Produce findings of significance and value to society</td>
<td>Develop findings of practical relevance to organizational stakeholders</td>
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Source: Adapted from Saunders et al., 2000

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Thirdly, research may be influenced by the fact that organizations are working in a world of competition, market influences and financial constraints. Research projects may have to be modified or cancelled. Research sponsors may criticize what they read in research reports, especially when these reveal organizational inefficiencies.

We have looked, briefly, at organizational research, but what do we mean by the ‘real world’? To many, it means businesses, companies, hospitals, schools, colleges or other organizations, and certainly these are important sites for, and sponsors of, research. The real world, however, can also include communities where people live, including residential areas, parks, shops, local amenities or areas where young people congregate. It could also mean networks such as community groups, educationalists, professional associations, management associations or trades unions. Increasingly it could also include virtual communities where people communicate with each other through the Internet. In other words, the real world comprises any setting where human beings come together for communication, relationships or discourse.

The real world, of course, contains a myriad of subjects that lend themselves to research. Table 1.2 provides just a general ‘feel’ for the kinds of areas that this book will explore. You will, of course, be thinking about or developing a research topic of your own.

But how do we go about addressing these kinds of research areas? One way to solve any problem in the real world is to do so systematically. While Figure 1.1 presents a very simplified version of such an approach (which will be modified in later chapters), it does at least offer a starting point. Gill and Johnson (1997) rightly caution that the wise researcher is one who gives equal attention to each of these phases. Many naïve researchers are tempted to rush into the ‘collect

<table>
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<th>TABLE 1.2 EXAMPLES OF REAL WORLD RESEARCH TOPICS</th>
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<tr>
<td>Women firefighters – breaking down barriers to recruitment</td>
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<td>Disability awareness training – does it change attitudes?</td>
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<td>Project management in virtual organizations</td>
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<tr>
<td>Identifying the factors that influence youth club membership and attendance</td>
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<td>Why don’t people buy recycled paper?</td>
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<td>The feasibility of transferring advanced horticultural practices to a poor developing country. A case study of three Romanian villages</td>
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<td>Does targeted neighbourhood policing work?</td>
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<tr>
<td>Housing association accommodation and services – an evaluation of tenant attitudes</td>
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<tr>
<td>How can call centre response times and the quality of feedback to customer queries be improved?</td>
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<td>The impact of intensive ‘exam culture’ on pupil sickness and medical referral</td>
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<tr>
<td>An evaluation of government ‘special measures’ on pupil attainment and teacher retention</td>
</tr>
<tr>
<td>Working trajectories – getting disaffected youths from ethnic communities into the jobs market</td>
</tr>
<tr>
<td>Measuring and improving customer satisfaction in a library</td>
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agendas that are not necessarily the same as those of the researcher.
information’ stage without first very clearly defining the research topic, and its objectives. The results of this fuzziness only become transparent later on, with the effect that the researcher has to cycle back to an earlier stage in the research process, or to start again.

Figure 1.1 shows that it is possible, in principle, to move from the identification of the research focus right through to the presentation of the findings in a neat sequence of steps. This, however, is an idealized model and is not necessarily the norm. The complexities of researching in the real world mean that the researcher may often have to revisit previous stages in the research process. For example, at the analysis stage it might emerge that the collection of important data has been overlooked. New plans will have to be formulated and the data collected before the researcher is able to return to the analysis and presentation of the findings. Indeed, as we shall see in later chapters, it is also valid for the researcher to enter ‘the field’ to gather data, with only the most general of notion of what she/he is looking for, and for the data to help in the generation of concepts and theories.

Figure 1.1 implies that the research process in a highly practical one. You identify a problem, decide on how to tackle it, collect data (which often involves discussions with other people), analyse and present findings and take action. But research, as was mentioned above, is more than a mere pragmatic activity; behind it lies the foundations of academic theories that have emerged through the process of scientific enquiry and investigation over many decades and even centuries. To theories we now turn.
THE NATURE OF THEORIES

A theory has been defined as:

_A set of interrelated constructs (concepts), definitions, and propositions that present a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting phenomena._ (Kerlinger, 1986: 9)

One might, for example, have a theory of business failure. The factors that might explain this could be: poor management practices, antagonistic labour relations, insufficient staff training, or a lack of investment. The actual failure of the business has to be explained by examining and understanding the interrelationship between these factors. Such understanding may take the form of a theory that is predictive or explanatory in nature. Indeed, a theory is only worthy of the term if it has some predictive qualities. As we shall see, if a theory is no longer predictive, a crisis ensues and the theory will, over time, be challenged and replaced by a new one.

There is no reason, however, to denigrate organizational research activity that is not theory-orientated. In both educational and organizational research it may be quite valid to undertake an investigation that merely seeks to find the immediate goal of a relationship between two variables (a characteristic that is measurable such as income, attitude, action, policy, etc.) But as Kerlinger (1986) points out, the most satisfying and usable relationships are those that can be generalized, that is, applied from the specific instance of the research findings to many phenomena and to many people. This is the nature of theory.

Activity 1.1

Examine each of the following statements and decide whether you agree with them. A theory:

- Is an accumulated body of knowledge, written by acknowledged experts.
- Informs ‘state-of-the-art’ concepts and innovations.
- Is a body of work where inconsequential or misleading ideas can be filtered out.
- Represents knowledge that should be viewed critically and rejected when incompatible with practice.
- Adds interest and intellectual stimulation to a project.
- Acts as a model against which ‘live’ business processes can be evaluated.
- Guides the execution of research methodology.

_Suggested answers are provided at the end of the chapter._
(Source: adapted from Gill and Johnson, 1997)
INDUCTIVE AND DEDUCTIVE REASONING

We have briefly examined the nature and uses of theory – but in research should we begin with theory, or should theory itself result from the research? Dewey (1933) outlines a general paradigm of enquiry that underpins the scientific approach, consisting of inductive discovery (induction) and deductive proof (deduction). Deduction begins with a universal view of a situation and works back to the particulars; in contrast, induction moves from fragmentary details to a connected view of a situation.

The deductive process

The deductive approach moves towards hypothesis testing, after which the principle is confirmed, refuted or modified. These hypotheses present an assertion about two or more concepts that attempts to explain the relationship between them. Concepts themselves are abstract ideas that form the building blocks of hypotheses and theories. The first stage, therefore, is the elaboration of a set of principles or allied ideas that are then tested through empirical observation or experimentation. But before such experimentation can take place, underlying concepts must be operationalized (made measurable) in such a way that they can be observed to confirm that they have occurred. Hence, measures and indicators are created. For example, if research is to be conducted into how organizational communications can be improved, we would first have to establish an operational definition of 'communication' within the context of organizational interactions. Through the creation of operational indicators, there is a tendency to measure and collect data only on what can actually be observed; hence, subjective and intangible evidence is usually ruled out. Table 1.3 provides a summary of this process.

The inductive process

Through the inductive approach, plans are made for data collection, after which the data are analysed to see if any patterns emerge that suggest relationships between variables. From these observations it may be possible to construct generalizations, relationships and even theories. Through induction, the researcher moves towards discovering a binding principle, taking care not to jump to hasty inferences or conclusions on the basis of the data. To ensure a degree of reliability, the researcher often takes multiple cases or instances, through, for example, multiplying observations rather than basing conclusions on one case (see Figure 6.4, Chapter 6).

It would not be true to say that the inductive process takes absolutely no note of pre-existing theories or ideas when approaching a problem. The very fact that an issue has been selected for research implies judgements about what is an important subject for research, and these choices are dependent on values and concepts. This may help to formulate the overall purpose of the research. But the inductive approach does not set out to corroborate or falsify a theory. Instead, through a process of gathering data, it attempts to establish patterns, consistencies and meanings.
Combining the inductive and deductive methods

Inductive and deductive process, however, are not mutually exclusive. Adapting Dewey’s (1933) formulation for a modern problem, let us say a researcher has been asked to investigate the problem of staff absenteeism. Taking a selection of facts (absentee rates over time, in different departments and across staff grades), the researcher is able to formulate a theory (inductive approach) that absenteeism is related to working patterns (see Figure 1.2). It is particularly rife amongst lower grade workers who are the objects of quite rigorous supervision and control. The researcher then becomes interested in what other impact this form of control may have on working practices (deductive approach). A working hypothesis becomes formulated that over-zealous supervision has produced low morale and therefore low productivity levels amongst sections of the workforce. This hypothesis is tested by the introduction of new working methods in some sections, but not others (an experimental approach using a control group), to compare productivity levels between traditionally supervised and the newly supervised sections. Figure 1.2 provides a summary of this process.

Activity 1.2

For your own research project, consider whether you intend to adopt an inductive approach, a deductive approach, or a combination of the two. List three reasons for your choice.
THE ORGANIZATION OF THE BOOK

The book is divided into five parts. Part A prepares the way by looking at the underpinning philosophy of research and the selection of suitable research topics. In Chapter 2 the nature and significance of theory is justified and the epistemological (philosophical) basis of theory explored. The chapter also describes how different epistemological perspectives provide the basis for research methodologies like experimental research, surveys, grounded theory and action research, all of which are discussed in detail in later chapters. If you have little or no previous experience of philosophy you may find this chapter rather daunting, but you are encouraged to tackle it, as it will help you to understand the approaches taken in later chapters.

Having provided an overarching view of research philosophy, methodologies and methods, Chapter 3 gets down to the practical issue of selecting and planning a research project. Advice is offered on how to identify research topics that meet your personal needs and experience and how to write a successful research proposal. Some of the ethical issues raised by research are discussed, an important topic that we return to many times in the book.

Part B deals with research methodology, beginning with experimental and quasi-experimental design (Chapter 4). This is an appropriate place to begin our discussion of methodology since this is one of the oldest and, in a sense, the classical approach to research design. The chapter not only describes and justifies alternative experimental designs, but introduces concepts (such as validity and reliability) that are appropriate for, or at least addressed by, many other research methodologies.

In Chapter 5 we take another, and increasingly popular, research methodology, surveys, and describe different types of survey and the process of survey design. A distinction is made between self-administered and interview-administered surveys and the merits of each is discussed. Partly because of their scale, surveys can be prone to sources of error such as sampling error, data collection error and interviewer error. Some practical advice is provided on how to cope with these.
Another widely used research methodology is the case study (Chapter 6). For many years, the case study approach has been wrongfully denigrated by some researchers as lacking in rigour, partly because it is often based upon a small number of cases. However, as this chapter shows, case studies, if carefully planned, can provide a powerful means of exploring situations where there is uncertainty or ambiguity about phenomena or events.

While some research methodologies attempt to uncover new knowledge, evaluation (Chapter 7) involves exploring how existing knowledge is used to inform and guide practical action. Hence, evaluation might be used to gauge whether a teaching or training programme has been successful. But evaluation can also be used to report on much larger units of analysis such as national policies or government-sponsored intervention programmes.

Of course, whichever research methodology (or combination of methodologies) we use, none can be successful without the use of sound and reliable data collection tools (Part C). We start here with a look at, perhaps, one of the most commonly used research instruments, the questionnaire (Chapter 8). This chapter shows how designing valid and reliable questionnaires requires adherence to a large number of design considerations that range from the writing of individual questions to the layout of the questionnaire itself.

Questionnaires are often used as the data gathering instrument for structured or semi-structured interviews. But interviews (Chapter 9) also necessitate that the researcher acquires a wide range of other skills associated with actually conducting the interview. This chapter, then, provides some practical advice on planning and conducting a variety of interview approaches.

But how do we know that interviewees tell the truth? It may be that they do not know the answer to a question or that they want to hide something from us. Another data gathering method, then, is observation (Chapter 10), which could be used either instead of an interview or as a supplement to it (to verify the data). As this chapter shows, observation might be undertaken overtly, where the subjects of the research know that they are being observed or covertly where the role of the researcher is disguised. Observation can also be conducted as either a participant in the research setting or as a non-participant.

One of the problems in using questionnaires, interviews and observations is that they are potentially reactive – that is, the data may become contaminated because of, say, the bias of the research instruments or the way data are interpreted by the researcher. An often neglected but equally powerful data gathering method is what is termed ‘unobtrusive measures’ (Chapter 11), which offer the benefit of being non-reactive. Unobtrusive measures include physical evidence, documentary evidence and archival analysis, including documents held on the World Wide Web. Unobtrusive measures can offer flexible, creative and imaginative ways of collecting data, often to verify findings from the use of other data collection methods.

Having collected data, they have to be analysed and the results presented (Part D). Of course, plans and designs for analysis should have been completed long before this stage. Chapter 12 looks at techniques for presenting and analysing quantitative data, including ways of categorizing quantitative data and cleaning
and coding data. This chapter also examines ways of analysing data using descriptive statistics and the use of some elementary inferential statistical techniques.

In contrast, Chapter 13 looks at the possible sources of qualitative data and approaches to how data can be analysed. It looks particularly at content analysis and grounded theory methods and also includes approaches such as the use of narratives, conversational analysis and discourse analysis. You will probably notice in reading Chapters 12 and 13 how some of the philosophical issues raised in Chapter 2 are given substance in terms of what is researched, and how the research is conducted.

After you have collected your data, you now want to present them in a way that enhances their credibility and impact. Chapter 14 looks at different types of research report including organizational and technical reports, and studies written up as part of an academic dissertation or thesis. Advice is given on key features, such as the use of appropriate language and writing style for the intended audience, and the structure of the report.

In a sense, Chapter 14, covering the final outcome of a research project, the report, might seem a logical place to conclude this book. However, Chapter 15 goes a stage further by exploring the purposes and methods behind action research. In Chapter 1, and, indeed, throughout the book, we look at real world issues and problems. Action research is about addressing and, in some cases, solving these problems. The key focus is not research for the sake of expanding knowledge but on achieving change (often in a company, school, college or community setting). We have, therefore, come full circle from Chapter 1, where we explored the need to address some of the issues in the ‘real world’, to our final chapter, which demonstrates one methodology that actively engages in the process of change through research.

**HOW TO USE THE BOOK**

How is the book best used as an aid to research? You could think of it as a research manual that also explains the theoretical underpinnings of research methods and provides guidance on where to find further information. It is recommended that you read through the book, focusing on the objectives listed at the beginning of each chapter. Try to get a feel for which aspects will be of particular interest to you, and noting any ideas or topics, approaches and practices that strike you as relevant to your research. During the research process revisit these parts and if you need further guidance, check with the further reading lists at the end of each chapter, which include brief details of the nature of the sources listed. Note also any associated Case Studies (which are designed to illustrate key research methodologies or approaches) and Activities (designed to promote thinking, reflection and skills development and, in the case of websites, a guide to additional information or resources). It is not expected that you attempt to complete all Activities – tackle those that you think would be most useful. Where it is felt appropriate, suggested answers are given for some Activities at the end of the relevant chapter.
INTRODUCTION

As indicated, some of the Activities in the book ask you to visit specified websites. If you do not have access to the Web, then these Activities can be omitted. But do note the growing importance of the Web for research in terms of providing data, tools, resources and access to both research respondents and fellow researchers.

SUMMARY

- The growing complexity of the world means that research in the real world is of growing importance. An understanding of the world is underpinned by theory.
- A theory consists of a set of interrelated concepts, definitions and propositions that demonstrate relationships between variables.
- Through the inductive approach, data are accumulated and analysed to see if relationships emerge between variables. The deductive approach uses a theory to generate a working hypothesis concerning relationships between variables. The hypothesis is operationalized and tested and is either accepted or rejected on the basis of the evidence.
- The inductive and deductive methods are not mutually exclusive. A researcher may turn a collection of data into a set of concepts, models or even theories (inductive approach) which are then tested through experimentation (deductive).

Suggested answers for Activity 1.1

Actually, it is all of them!