DOING RESEARCH IN THE REAL WORLD

FOURTH EDITION

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INTRODUCTION

Chapter outline
- Research in the real world 3
- The nature of theories 5
- An overview of the research process 6
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- How to use this book 9
Keywords

- Methodology
- Theory
- Basic research
- Applied research
- Research topics
- Research process

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.
- Use this book effectively by making use of its features such as Activities and Top Tips.
- Use this book to build up your Employability Skills.

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, communities 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 and pervasive. Organizations have adapted to this uncertainty in a number of ways. One approach has been to understand (often through 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. Indeed, in terms of research in the health sector and in education, it is common to now talk of evidence-based practice. Furthermore, governments and other sponsors of research, have shown a desire to see ‘value for money’ when funding research projects, based, at least in part, on projects providing evidence of sound and robust research methodologies.

Faced with a more competitive, dynamic and uncertain world, knowledge of research methods is important because it helps people in organizations to understand, predict and control their internal and external environments (Sekaran and Bougie, 2013). 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.

Research is also of value in itself. Completing a research project (such as a dissertation or thesis) can provide you with lifelong skills, including Employability Skills (writing research proposals, planning the research, designing data gathering instruments, collecting data and abiding by a code of research ethics, to name but a few). Employability Skills include sets of achievements, knowledge and personal attributes that make individuals more likely to gain employment and to
be successful in their chosen occupations (Knight and Yorke, 2002). As we discuss below, Employability Skills are, in part, built up through developing research skills and are a feature of this book. But what do we mean by the term ‘research’? Let’s look at this in more detail.

**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, 2007: 4). Hence, research is often about how (process) to solve real problems (content) (Gill and Johnson, 2002). This may have a very practical focus (applied research), with an emphasis on achieving measurable outputs that are specific to a particular society or organization. The results of such research may be of significance to a specific context, but difficult to generalize elsewhere. On the other hand, research may also be concerned with clarifying, validating or building a theory (basic research) and is often undertaken with the primary purpose of advancing knowledge for its own sake (Bentley, Gulbrandsen and Kyvik, 2015).

Its importance to society or to organizations may be determined by the extent to which this theory is translatable into a specific context. However, most organizations will only see research as valid if it is seen to lead to practical outcomes (Easterby-Smith et al., 2002). Then there are forms of research comprising collaboration between the researcher and professional practitioners (often an element of **action research**). Table 1.1 provides a summary illustrating a continuum between basic and applied research.

Research in the real world brings with it many challenges. First, it needs to draw upon broad fields of inquiry such as sociology, psychology, anthropology, philosophy, communication and economics. This often means having to adopt an inter-disciplinary approach, incorporating ideas and approaches from a diverse range of subject backgrounds. Secondly, research in the real world means the researcher has to gain access to social settings or working environments where key research sponsors, gatekeepers or stakeholders may have their own agendas that are not necessarily the same as those of the researcher. Thirdly, research may be influenced by the fact that research sponsors such as governments or businesses 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 inadequacies or inefficiencies in the systems they manage.

But what do we mean by the ‘real world’? For many, it means businesses, 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 communities.

<table>
<thead>
<tr>
<th>Table 1.1</th>
<th>Basic and applied research</th>
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<tbody>
<tr>
<td>Basic research</td>
<td>Applied research</td>
</tr>
<tr>
<td>Purpose</td>
<td>Purpose</td>
</tr>
<tr>
<td>Expand knowledge of social or organizational processes</td>
<td>Improve understanding of specific social or organizational problems</td>
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<tr>
<td>Develop universal principles</td>
<td>Create solutions to social or organizational problems</td>
</tr>
<tr>
<td>Produce findings of significance and value to society</td>
<td>Develop findings of practical relevance to public and organizational stakeholders</td>
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*Source: Adapted from Saunders et al., 2012*
areas, parks, shops, local amenities or areas where 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 (2002) 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 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 implies that the research process is 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 and Lee, 2000: 9)

One might, for example, have a theory of business failure in a business start-up company such as a new online retailer for folding bicycles. The factors that might explain this could be: poor Web design, faults in product design, insufficient sales 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 research activity that is not theory-orientated. In 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.). Taking our online bicycle retailer above the variables might be profit levels and management skills (related to Web design, product design, etc.).

But as Kerlinger and Lee (2000) point 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, 2002

**AN OVERVIEW OF THE RESEARCH PROCESS**

We saw above that research often comprises an investigation into the relationship between two (or more) variables. However, before we undertake a research study, we need to know more about these variables and what studies, if any, have been conducted into their relationship. Hence, we undertake a literature review (see Figure 1.1). In doing this, we will be interested in the literature on the dependent variable (the variable that forms the focus of the research) and the independent variable (the variable that acts on or predicts the dependent variable). So, for example, we might investigate public attitudes to healthy eating (the dependent variable) following a local campaign (independent variable). But there is a third source of literature we also need to investigate and that is where studies have already been completed that have explored the relationships between healthy eating and campaigns designed to improve eating patterns (see dependent/independent variable in Figure 1.2). As we will see when looking at inductive and qualitative methods, this sequential, literature first approach, is not always followed, but it is typical of many studies.

The literature review has another important purpose. It helps to define the focus and scope of the research project about to be undertaken. Above all, it leads to one or more research questions which give direction and frame the study. As we will see later, research questions, providing they are written accurately and concisely, provide an essential bridge between the literature review (the subject) and methodology (how the subject is going to be investigated and researched). It is difficult to exaggerate how important it is to formulate a set of clear research questions.
THE ORGANIZATION OF THE BOOK

The book is divided into four 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.

Chapter 4 on ethics in research is important given the fact that students and professional researchers now usually have to abide by the ethical frameworks devised by their educational institutions or professional associations – often referred to as Institutional Review Boards. This chapter shows you how to construct research designs that follow these important principles. Note that the discussion of ethics is not confined to this chapter but appears often throughout the book.

Chapter 5 looks at some of the many ways in which you can begin to locate, search and use the literature on your chosen subject. It shows you how to plan your search, store data and undertake a critical review of your literature sources.

Part B deals with research methodology, beginning with quantitative research designs, including experimental and quasi-experimental design (Chapter 6). 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. Chapter 7 provides a description of various
Qualitative designs, while Chapter 8 takes you a step further by introducing the notion of combining quantitative and qualitative designs to produce a mixed methods approach. Mixed methods can help you by combining some of the best elements of quantitative and qualitative approaches. Of course, none of these approaches will work if the sampling design is not right and Chapter 9 is devoted to this key theme.

In Chapter 10 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 are 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 11). 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 12) 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.

Chapter 13 completes Part B by exploring the purposes and methods behind action research. In this chapter 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).

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 14). 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 15) 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 (Chapters 16 and 17). Chapter 16 discusses non-participant observation, while Chapter 17 looks at observation through participant observation, and particularly through ethnographic approaches. Ethnography is a research method that seeks to understand cultural phenomena that reflect the knowledge and meanings that guide the life of cultural groups within their own environment. In both participant and non-participant observation, the observation may be conducted overtly, where the subjects of the research know that they are being observed or covertly where the role of the researcher is disguised.

Chapter 18 on focus groups is also a new chapter. Focus groups in recent years have become an increasingly popular data gathering method among researchers in part because they stimulate dialogue and debate among participants, often eliciting a rich array of views and perspectives.

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 19), 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.

Chapter 20 (a new chapter for this fourth edition) explores visual research methods, for example, analysing the visual content of business reports or marketing materials or working with employees who take photographs or videos in their workplace as part of a research study. Chapter 21 (also a new chapter for this latest edition) discusses Internet-mediated research methods, making a distinction between researching through social media (for example, using Facebook to conduct a survey) and researching into behaviour and activities within social media (for example, exploring the types of social relationships within the social media space).

Chapter 22 looks at the analysis of secondary sources. Secondary analysis involves the use of existing data, collected for the purpose of a prior study, in order to pursue a research interest which is distinct from the original work. This may comprise a new research question or an alternative perspective on the original question. Sometimes researchers will make use of secondary sources because it becomes possible to make use of longitudinal data; other researchers (often student researchers) will use secondary sources in situations where access to primary data is problematic.

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 23 is designed to help you to get started in using IBM SPSS Statistics. Researchers who are new to statistics find the additional challenge of getting to grips with a new software program like SPSS somewhat daunting. This chapter introduces you to some of the basic functions of SPSS so you are up and running for Chapter 24 which 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.

Chapter 25 (a new chapter for this fourth edition) is designed to help get started in using NVivo, one of the more popular programs used in the analysis of qualitative data. Chapter 26 then explores some of the approaches to how qualitative 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 24 and 26 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 27 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. Finally, Chapter 28 explores the ‘art’ of giving a presentation (often required at the end of an academic programme) and passing a viva.

# 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, 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 readings lists at the end of each chapter, which include brief
details of the nature of the sources mentioned. Note also any associated Case Studies (which are
designed to illustrate key research methodologies or approaches) and Activities (designed to pro-
mote 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. ‘On the Web’ encourages you to visit useful
websites that often provide valuable additional information.

Finally, take a careful note of Employability Skills. As mentioned earlier, we all need to develop
these skills if we want to enter or retain our position in the world of work (Holmes, 2017). Becoming
skilled and experienced as a researcher is itself a vital employability skill. Table 1.3 offers a range of

<table>
<thead>
<tr>
<th>Employability Skill</th>
<th>Research skill (example)</th>
<th>Location in this book</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WRITTEN COMMUNICATION:</strong> Writing clearly expressed and accurate reports, emails, etc., for target audience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linking written work to career aspirations</td>
<td>Linking research projects to career goals</td>
<td>Employability Skill 3.1</td>
</tr>
<tr>
<td>Gathering, analysing and arranging your information in a logical sequence</td>
<td>Presenting information in a logical sequence</td>
<td>Employability Skill 27.1</td>
</tr>
<tr>
<td>Developing your argument in a logical way</td>
<td>Developing a writing style and tone</td>
<td>Employability Skill 27.4</td>
</tr>
<tr>
<td>Being able to condense information/produce concise summary notes</td>
<td>Condense and summarize information</td>
<td>Employability Skill 5.1</td>
</tr>
<tr>
<td>Adapting your writing style for different audiences</td>
<td>Writing up research for different audiences</td>
<td>Employability Skill 27.1</td>
</tr>
<tr>
<td><strong>VERBAL COMMUNICATION:</strong> Expressing oneself clearly and appropriately to the target audience</td>
<td></td>
<td></td>
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<tr>
<td>Listening carefully to what others are saying</td>
<td>Active listening skills (in interviews)</td>
<td>Employability Skill 15.2</td>
</tr>
<tr>
<td>Able to clarify and summarize what others are saying</td>
<td>Testing and summarizing understanding</td>
<td>Employability Skill 15.3</td>
</tr>
<tr>
<td>Helping others to define their problems. Not interrupting</td>
<td>Active listening skills (in interviews)</td>
<td>Employability Skill 15.2</td>
</tr>
<tr>
<td>Being sensitive to body language as well as verbal information</td>
<td>Observing the body language of interview respondents</td>
<td>Employability Skill 15.4</td>
</tr>
<tr>
<td>Making the right impression by making effective use of dress, conduct and speech</td>
<td>Impression management</td>
<td>Employability Skill 15.1</td>
</tr>
<tr>
<td>Keeping business telephone calls to the point</td>
<td>Maintaining focus</td>
<td>Employability Skill 15.5</td>
</tr>
<tr>
<td>Thinking up an interesting way of putting across a message to a group</td>
<td>Generating interest in the presentation</td>
<td>Employability Skill 27.2</td>
</tr>
<tr>
<td>Successfully establishing rapport when speaking to a group</td>
<td>Establishing rapport</td>
<td>Employability Skill 18.1</td>
</tr>
<tr>
<td><strong>FLEXIBILITY:</strong> Adapting to changing situations and environments and learning from them</td>
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<tr>
<td>Planning ahead but having alternative strategies if things go wrong</td>
<td>Planning a research project</td>
<td>Employability Skill 3.2</td>
</tr>
<tr>
<td>Employability Skill</td>
<td>Research skill (example)</td>
<td>Location in this book</td>
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<tr>
<td>------------------------------------------------------------------------------------</td>
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<tr>
<td>Keeping calm and persisting in the face of difficulties</td>
<td>An essential research skill! Empirical research rarely goes exactly to plan</td>
<td>Employability Skill 18.2</td>
</tr>
<tr>
<td><strong>PERSUADING:</strong> convincing others</td>
<td>Presenting research findings at a conference</td>
<td>Employability Skill 28.3</td>
</tr>
<tr>
<td>Putting across arguments in a reasoned way</td>
<td>Being empathetic to respondent when interviewing them</td>
<td>Employability Skill 15.1</td>
</tr>
<tr>
<td>Understanding the needs of the person you are dealing with</td>
<td>Dealing with examiners at a viva</td>
<td>Employability Skill 28.1</td>
</tr>
<tr>
<td>Handling objections to your arguments</td>
<td>Negotiating access to a research site such as an organization</td>
<td>Employability Skill 3.1</td>
</tr>
<tr>
<td>Using tact and diplomacy</td>
<td><strong>TEAMWORK:</strong> working effectively with supervisors and fellow researchers</td>
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<tr>
<td><strong>TEAMWORK:</strong> working effectively with supervisors and fellow researchers</td>
<td>Working with a supervisor to achieve accreditation</td>
<td>Employability Skill 27.2</td>
</tr>
<tr>
<td>Working towards a common goal</td>
<td>Delivering team presentations</td>
<td>Employability Skill 28.1</td>
</tr>
<tr>
<td>Contributing your own ideas effectively in a group</td>
<td>Facilitating discussion at a focus group</td>
<td>Employability Skill 18.3</td>
</tr>
<tr>
<td>Listening to the opinions of others</td>
<td>Defending your thesis at your PhD viva</td>
<td>Employability Skill 28.1</td>
</tr>
<tr>
<td>Being assertive</td>
<td>Listening to the constructive feedback of supervisors</td>
<td>Employability Skill 27.2</td>
</tr>
<tr>
<td>Accepting and learning from constructive criticism</td>
<td><strong>PLANNING AND ORGANIZING:</strong> planning activities and carrying them through effectively</td>
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<tr>
<td><strong>PLANNING AND ORGANIZING:</strong> planning activities and carrying them through effectively</td>
<td>Setting research questions</td>
<td>Chapter 6: Constructing research questions; Chapter 7: Formulating research questions</td>
</tr>
<tr>
<td>Setting objectives that are achievable</td>
<td>Planning a research timetable</td>
<td>Chapter 3: Selecting and Planning Research Proposals and Projects</td>
</tr>
<tr>
<td>Managing your time effectively/using action planning skills</td>
<td>Completing research project/dissertation/thesis on time</td>
<td>Chapter 3: Planning the project</td>
</tr>
<tr>
<td>Completing work to deadlines</td>
<td><strong>INVESTIGATING, ANALYSING AND PROBLEM SOLVING:</strong> Gathering information systematically to establish facts and processes</td>
<td></td>
</tr>
<tr>
<td>Clarifying the nature of a problem or solution before deciding action</td>
<td>Conducting a pilot study</td>
<td>Chapter 14: Piloting questionnaires; Chapter 18: Piloting focus group questions</td>
</tr>
<tr>
<td>Collecting data systematically</td>
<td>Using quantitative and qualitative methods for data gathering</td>
<td>PART C: Data collection methods, Chapters 14–20 Employment Skill 12.1, Employment Skill 16.1</td>
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Table 1.3  (Continued)

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<tr>
<th>Employability Skill</th>
<th>Research skill (example)</th>
<th>Location in this book</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classifying data</td>
<td>Categorizing quantitative data</td>
<td>Chapter 22: Categorizing quantitative data</td>
</tr>
<tr>
<td>Recognizing inconsistencies in reasoning</td>
<td>Critically analysing the literature</td>
<td>Chapter 5: Doing a critical literature review</td>
</tr>
<tr>
<td>Using creativity/initiative in the generation of alternative solutions to a problem</td>
<td>In writing up research, acknowledge alternative interpretations and perspectives</td>
<td>Employability Skill 27.3</td>
</tr>
</tbody>
</table>

**NUMERACY:** Effectively handling, organizing and interpreting data

**Reading and interpreting graphs and tables**
- Interpreting quantitative data using descriptive statistics
  - Chapter 24: Presenting data using descriptive statistics

**Using statistics**
- Using SPSS
  - Selecting appropriate statistical tests
  - Chapter 23: Getting started using SPSS
  - Chapter 24: Statistical analysis: comparing variables; Statistical analysis: associations between variables

**Sampling**
- Generalizing from samples to populations
  - Employability Skill 6.1
  - Understanding the strengths and weaknesses of selected sampling design

**COMPUTING SKILLS:** Effectively using databases, the Internet and data analysis programs

**Using databases**
- Bibliographic databases, e.g. Business Source Premier
  - Chapter 5: Searching source materials

**Using the Internet**
- Searching the web for secondary data
  - Chapter 5: Sources of secondary data
- Launching a web-based survey
  - Chapter 15: Web-based questionnaires

**Using the data analysis programs**
- Using quantitative data analysis programs
  - Chapter 22: Getting started using SPSS
- Using qualitative data analysis programs
  - Chapter 24: Getting started using NVivo

**MANAGING LEARNING:** Ability to manage own learning

**Learning through reflecting**
- Reflecting on own learning
  - Employability Skill 16.1

**ETHICAL PRACTICE:** Understanding and upholding ethical codes in research

**Understanding and abiding by ethical principles**
- Conducting research while adhering to ethical standards
  - Chapter 4 Research Ethics
  - Employability Skill 4.1

Employability Skills, and where research skills can contribute to learning them. It also provides a roadmap for where these can be located in the book. Throughout the book the Employability Skills feature will comment on how you can enhance these skills.
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.
- Basic research seeks to develop universal principles and to produce findings that are of value to society; applied research seeks to create practical solutions to organizational problems.
- Organizational and social research draw upon fields of inquiry such as sociology, anthropology, philosophy, communication, economics and statistics, often adopting an inter-disciplinary approach.
- A theory consists of a set of interrelated concepts, definitions and propositions that demonstrate relationships between variables.
- In using this book, do take the time to read the Case Studies, take note of Employability Skills, undertake the Activities and to visit the ‘On the Web’ sites.

Journal resources

Calvert, J. (2006) ‘What’s special about basic research?’, Science, Technology & Human Values, 31(2): 199–220. Argues that ‘basic research’ is a flexible and ambiguous concept that is drawn on by scientists to acquire prestige and resources. Also shows that it is used for boundary work.

Suggested answers for Activity 1.1

Actually, it is all of them!