This invaluable guide takes the researcher through every stage of an action research project – from its inception, to collecting and analysing data, and then writing up the final report.

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What is Action Research?

The central purposes of these pages are to enable action research practitioners to undertake and to offer an account of a project. Following are seven sections, the first six of which are headed by a commonly-asked question. Having examined the nature of action research and arguments for undertaking it in educational settings, I shall focus on developing an appropriate project, data collection and analysis, and producing a research report. The final section offers suggestions for further reading.

The nature of action research

In order to undertake an action research project within educational settings, we need to begin by giving some thought to the question: 'What is action research?' This, in turn, raises two further questions: 'What is research?' and 'What is educational research?' How are we to respond to these questions? One effective way of doing so is to place them in order, beginning with the most general, and then to do some reading and thinking about each in turn:

What is research?
What is educational research?
What is action research?
Of the three questions, the most general is: ‘What is research?’ As a starting point, it is useful to examine some texts that discuss a broad range of approaches to engaging in research. These reveal that there are: (1) many different types of research; and (2) numerous views as to the nature of each, how it should be conducted and what it aims to achieve.

For example, when discussing social research, Robson (2002, p. 26) cites the following: ‘ethnography, quantitative behavioural science, phenomenology, action research, hermeneutics, evaluation research, feminist research, critical social science, historical-comparative research, and theoretical research’. It is useful to compare this list with some examples offered by Blaxter et al. (1996, p. 5): ‘pure, applied and strategic research; descriptive, explanatory and evaluation research ... exploratory, testing-out and problem-solving research; covert, adversarial and collaborative research; basic, applied, instrumental and action research’.

When reading general texts, you will see many references to these (and other) kinds of research. At this stage, it is important to note several points. First of all, do not be confused or distracted by the ‘labels’ that are attached to various kinds of research. Instead, ask yourself:

1. What sorts of practices are being engaged in by those who undertake action research, ethnography, evaluation research etc.?
2. What rationale is offered to support these practices?

In looking for commonalities between the types of research they cite, Blaxter et al. (1996, p. 5) offer a succinct summary: ‘the basic characteristics shared by all of these ... is that they are, or aim to be, planned, cautious, systematic and reliable ways of finding out or deepening understanding’.

Second, look for references to the particular kinds of research in which you are interested. For our purposes, both of the above lists are useful because they include ‘action research’. Third, before moving on to examine more substantial accounts of action research, read and think carefully about the briefer outlines given by writers such as those cited above. Then ask yourself key questions:

1. What do these outlines have in common?
2. What is distinctive (if anything) about each?

Having considered the question ‘What is research?’, which he defines as ‘systematic, critical and self-critical enquiry which aims to contribute to the advancement of knowledge and wisdom’, Bassey. (1999, p. 38) moves on to offer a response to the question ‘What is educational research?’. Such research, he argues, ‘is critical enquiry aimed at informing educational judgements and decisions in order to improve educational action’ (p. 39). I shall return to the idea of ‘critical enquiry’ in Section 2. In the meantime, Bassey’s definition, focusing as it does on the improvement of educational action, leads us to the third question ‘What is action research?’.

In order to answer this question, we will consider some definitions:

‘Action research is a process of systematic reflection, enquiry and action carried out by individuals about their own professional practice’ (Frost, 2002, p. 25).
‘Action research is a term used to describe professionals studying their own practice in order to improve it’ (GTCW, 2002a, p. 15).
‘Educational action research is an enquiry which is carried out in order to understand, to evaluate and then to change, in order to improve some educational practice’ (Bassey, 1998, p. 95).
‘Action research combines a substantive act with a research procedure; it is action disciplined by enquiry,
a personal attempt at understanding while engaged in a process of improvement and reform’ (Hopkins, 2002, p. 42).

‘When applied to teaching, [action research] involves gathering and interpreting data to better understand an aspect of teaching and learning and applying the outcomes to improve practice’ (GTCW, 2002a, p. 15).

‘Action research is a flexible spiral process which allows action (change, improvement) and research (understanding, knowledge) to be achieved at the same time’ (Dick, 2002).

‘Action research is . . . usually described as cyclic, with action and critical reflection taking place in turn. The reflection is used to review the previous action and plan the next one’ (Dick, 1997).

‘Action research is . . . an approach which has proved to be particularly attractive to educators because of its practical, problem-solving emphasis . . . ’ (Bell, 1999, p. 10).

Considering a variety of sources in this way enables us to develop an understanding of action research and its central aims. Before we explore these areas further, you might like to examine the above definitions, identify commonalities and differences, and then write out your own brief response to the question “What is action research?” This is an exercise I have given both to undergraduate and postgraduate students. Results usually demonstrate a substantial amount of agreement. Below, I outline the eight quotations once again, together with the responses typically made by practitioners. I have indicated each new idea in bold letters and underlined aspects covered by previous definitions. In this way, it is possible to see quickly both areas of agreement and difference:

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‘Action research is . . . an approach which has proved to be particularly attractive to educators because of its practical, problem-solving emphasis . . . ’ (Bell, 1999, p. 10).

An examination of these definitions suggests the following:

Action research is referred to variously as a term, process, enquiry, approach, flexible spiral process and as cyclic.

It has a practical, problem-solving emphasis.

It is carried out by individuals, professionals and educators.

It involves research, systematic, critical reflection and action.

It aims to improve educational practice.

Action is undertaken to understand, evaluate and change.
Research involves gathering and interpreting data, often on an aspect of teaching and learning. Critical reflection involves reviewing actions undertaken and planning future actions.

Reading a number of accounts of action research is instructive because, in doing so, it becomes clear that there is both agreement and disagreement among authors as to what are its defining characteristics. For example, Denscombe (1998, pp. 57–8) suggests four such characteristics:

1. its practical nature;
2. its focus on change;
3. the involvement of a cyclical process;
4. its concern with participation.

‘Practitioners are the crucial people in the research process. Their participation is active, not passive’. However, Dick (2000) rejects the view that action research ‘must be participative, or qualitative or published. It often is and I accept this . . . But . . . I regard its cyclical/spiral process and its pursuit of both action and research as its defining characteristics’.

What are the consequences of such agreements and disagreements for the researcher? I would like to make two points here. First, if you are undertaking an action research project, it is important to understand that the nature of such work is the subject of keen debate. As we have seen, writers offer their own competing and complementary views as to the fundamental character of action research. Second, if you are completing this project as part of a course of study for an academic qualification, you will need to engage critically with some of the arguments, positions and theoretical perspectives advanced by writers such as those mentioned above. I shall say more about this in Section 3.

Model of action research

In order to illustrate their views, many authors offer diagrammatic representations of action research models. At its most basic, action research can be viewed in terms of the processes outlined in Figure 1.1.

This model has its origins in the work of Kurt Lewin (1946) and has been cited in several contemporary accounts of action research (e.g. Ritchie et al., 2002). From the point of view of teachers and teaching, it involves deciding on a particular focus for research, planning to implement an activity, series of activities, or other interventions, implementing these activities, observing the outcomes, reflecting on what has happened and then planning a further series of activities if necessary.

Dick (2002) has argued that the action research cycle can be characterized by action leading to critical reflection and then perhaps, to further action. As he says: ‘So action is followed by critical reflection: What worked? What didn’t? What have we learned? How might we do it differently next time?’ Furthermore: ‘Reflection is followed by action. The understanding achieved, the conclusions drawn, the plans developed . . . These are tested in action.’

The action research cycle is further illustrated in Figure 1.2. Here the idea is to demonstrate that, while action
research can often involve undertaking a single cycle of planning, acting, observing and reflecting, it can also lead to more lengthy and substantial studies within educational settings.

These may be projects that are undertaken as part of study for a research degree, or funded research projects where the timescale and scope of the research extend beyond what is normally possible to teachers conducting small-scale classroom-based research. If you wish to complete an action research thesis for an MPhil. or PhD, a number of general and specific texts will be helpful (see, for example, Cryer, 2000; Dick, 1993, 2000; Phillips and Pugh, 1987; Salmon, 1992).

A more elaborate action research model is offered by Michael Bassey, whose framework consists of eight stages which may be summarized as follow (see Bassey, 1998, pp. 94–5 and Robson, 2002, pp. 217–18):

Stage 1: Defining the enquiry.
Stage 2: Describing the educational situation.

Stage 3: Collecting and analysing evaluative data.
Stage 4: Reviewing the data and looking for contradictions.
Stage 5: Tackling a contradiction by introducing some aspect of change.
Stage 6: Monitoring the change.
Stage 7: Analysing evaluative data concerning the change.
Stage 8: Reviewing the change and deciding what to do next.

The framework is based on three central questions (Bassey, 1998, p. 94): what is happening in this educational situation of ours now? (Stages 1 to 4); what changes are we going to introduce? (Stage 5); what happens when we make the changes? (Stages 6 to 8). To accompany these questions and framework, Bassey offers seven invented examples of possible action research projects.

For the purposes of illustration, I shall summarize one of these here. The project focuses on an initial question, which defines the inquiry (Stage 1): “How do I, as head, know what is going on in classrooms?” (p. 96).

In describing the situation (Stage 2), the headteacher indicates that he has recently been appointed to his post. His predecessor tended to manage the school from his room and visited classrooms infrequently. With the intention of providing educational leadership, the headteacher begins his action research project (Stage 3) by initiating a discussion among the staff and indicating his proposals for responding to the initial question. Over two weeks, he conducts a ten-minute informal interview with each teacher about the question and makes notes which are agreed with the teacher. He writes a brief paper for staff which summarizes the findings and indicates “a wide range of views from “welcome” to “please keep out”” (p. 96).
The paper is discussed at a staff meeting (Stage 4) and the headteacher attempts to focus on the evident contradiction between his view of his role and the variation of responses made by the staff. At Stage 5, 'Tackle a contradiction by introducing a change', the head indicates his decision to visit classrooms for brief periods, as unobtrusively as possible, to talk with pupils and to look at their work. He says that he will share his thoughts about this process with teachers, on the same day that his visits take place, and he asks them to keep a diary (one brief entry per week) in order to monitor the change (Stage 6).

Another member of staff (possibly the deputy headteacher, although this person is only identified by her initials) offers to read the diaries and to report on staff perceptions of the headteacher's visits (Stage 7). In turn, the head gives his own report about how this process has facilitated his goal of providing appropriate educational leadership. Stage 8 involves reviewing the change and deciding what to do next. This is accomplished at a staff meeting to discuss the reports produced, as a preliminary to agreeing an appropriate course of action.

The final action research model that I shall outline has been produced by Denscombe (1998, p. 60). His framework illustrates the cyclical process in action research and contains five elements: professional practice, critical reflection, research, strategic planning, and action. This model can be represented in several ways and Figure 1.3 outlines one example.

The framework involves beginning with professional practice and reflecting critically on it. Such reflection may lead to the identification of a particular problem or issue that requires research. When this enquiry has been completed, the findings from the research become the starting point for the development of an action plan. Strategic planning leads to instigating change (action), which impacts on professional practice. The cycle then begins again and a further round of critical reflection enables the researcher to evaluate changes made. At this point, conclusions may be drawn and the project may come to an end. However, it is possible that, following the evaluation, some further research may be deemed necessary. If so, the cycle moves on to re-visit this aspect and further 'systematic and rigorous enquiry' (p. 60) is undertaken.

Some authors have argued that one of the major problems with such research concerns the prescriptive nature of its models, as these may restrict the flexibility with which teachers undertake their studies. For example, Hopkins (2002, p. 50) suggests that 'the tight specification of process steps and cycles may trap teachers within a framework which they come to depend on and

1. Professional practice
2. Critical reflection (identify problem, or evaluate changes)
3. Research (systematic and rigorous enquiry)
4. Strategic planning (translate findings into action plan)
5. Action (instigate change)

Figure 1.3  A representation of Denscombe's action research model.
which will, consequently, inhibit independent action’. Hopkins highlights a further problem when he notes that ‘the models may appear daunting and confusing to practitioners’ (p. 50).

How are we to respond to this critique? To begin with, it should be acknowledged that some action research models are complex both in their design and theoretical justification. Should this lead to misunderstanding or confusion on the part of practitioners, then these models will have failed to achieve their desired purpose: the improvement of educational practice. This said, I would agree with Bob Dick and others that one of the defining characteristics of action research is its cyclical nature. Essentially it focuses, in turn, on action and critical reflection. While this may be represented in the form of a model (or models), it is important to remember, as we saw in section one, that practitioners are offered a range of possible models from which to choose. The emphasis here is on choice and not prescription.

I would agree with those who say that choosing a pre-defined framework within which to conduct a research project is, by its very nature, potentially restrictive. However, rather than this being problematic, it is actually an important indicator of a project’s likely success. Research projects should be structured soundly and it must be clear from the initial proposal exactly what is being excluded from the work to be undertaken as well as what is included.

To opt for action research must involve intention and critical reasoning on the part of the researcher: it is a deliberate choice of a particular type of enquiry. Once this initial choice has been made, practitioners should then decide which action research framework is likely to enable them to achieve their aims and to complete their studies successfully. This involves either selecting from the range of models available or possibly developing one’s own model (on the latter option, see McNiff with Whitehead, 2002, p. 55). To argue that researchers should choose or devise a model of action research within which to shape their studies is not, of course, to advocate the imposition of particular models, as these may not be ‘representative of the realities practitioners will experience. Practitioners need to see these models for what they are: guidelines for how we hope things will eventually fall out’ (McNiff with Whitehead, 2002, p. 52). In order to illustrate the choice that is available to researchers, I shall use Denscombe’s model to develop three action research projects in Section 4, below. Having examined the question ‘What is action research?’ arguments for undertaking it in educational settings will be explored in the next section.
Why Undertake Action Research?

Having offered an account of the nature of action research, my aim in this section is to offer a response to the question 'Why undertake action research?'. In order to do this, I shall explore the following key themes: the teacher as reflective practitioner; the teacher as researcher; teaching as a research-based profession; problems with educational research; teacher research and school improvement; and the role of research in teachers’ continuing professional development.

Rationales for undertaking action research

The idea that teachers should be 'reflective practitioners' or should engage in 'reflective practice' has gained popularity due, in large part, to the work of Donald Schön. His books on *The Reflective Practitioner: How Professionals Think in Action* (1991a) and *Educating the Reflective Practitioner* (1991b) have a particular relevance for educationalists because of Schön's view that, as practitioners, they should: (1) engage in the study of their own practice; and (2) develop their own educational theories deriving from that practice (see McNiff with Whitehead, 2002). Action research provides an appropriate medium to enable these two aims to be achieved.
This raises the issue of the relationships that exist between educational theory and practice. While I shall return to this theme in Section 3, it is necessary here to make some preliminary comments about it. To begin with, we should note that while educational theory and practice are inextricably linked, the relationship between them has been (and continues to be) the subject of keen debate. Since the 1980s, numerous attacks have been made against the theoretical study of education within initial teacher education and training (ITET) courses. For example, in a pamphlet entitled *Who Teaches the Teachers?*, Anthony O’Hear (1988, p. 26) suggests that ‘what is vital in teaching is practical knowledge combined with emotional maturity and not theoretical knowledge at all’. In a subsequent article, O’Hear indicates the limited value which he attaches to the systematic discussion and evaluation of educational theories. He argues (1989, p. 23) that the theoretical study of education ‘should be made available to those teachers who feel a need for it’ but suggests that it is more appropriate for practitioners to undertake such study once they have benefited from some experience of the classroom.

Dick (2000) explores an interesting aspect of the theory-practice debate when making a distinction between what he calls ‘theory-driven’ and ‘data-driven’ research. In order to illustrate the differences between these two approaches, Dick asks two questions of postgraduate researchers. The first concerns whether they wish to engage in ‘research that turns first to a body of extant literature and contributes to knowledge by assuming that literature as a given and extending or refining it, or challenging it?’ (a theory-driven perspective). Alternatively, do they want to ‘deal with the research situation and the people in it as they are, as far as possible putting aside . . . preconceptions’, with a view to ‘fully experienc-
and from the relevant literature how to adopt a particular approach to research.

The second type of researcher is described as someone who undertakes research 'with whatever resources and understanding [he/she] can bring to bear' and who learns from the experience. Dick indicates that these two perspectives involve a shift in the teaching-learning interface and, consequently, in the supervisor-student relationship. He suggests that the conception of the 'researcher as performing artist' involves learning mainly through 'questioning enquiry', in a context where the supervisor acts as a mentor rather than as a teacher.

What are we to make of these two sets of distinctions (theory-driven versus data-driven research and the researcher as technician versus the researcher as performing artist)? I would argue that there is no need to choose between the alternatives offered in either case, as each has its own merits and strengths. Essentially, I would want to ask the following questions: Why can research not be both theory- and data-driven? Why is it not possible to view the researcher as, in some sense, both an apprentice and (at least potentially) a performing artist?

Action research undertaken for an academic award is essentially and inevitably a form of apprenticeship, and success depends on one's ability to do several things with a certain degree of skill. However, as we shall see in the following sections of this book, the competencies and skills required to enable practitioners to complete projects to a high standard can be taught and learned. Furthermore, while technical proficiency is certainly an essential prerequisite for success, this does not preclude critical, reflective enquiry. Indeed, the ability and willingness to ask pertinent questions, to test assumptions, to ask for reasons and evidence to support arguments, and to engage in systematic thinking about relationships between theory and practice, are essential attributes of the researcher (and this irrespective of whether the activities engaged in are conceived of as being theory- or data-driven).

A focus on relationships between theory and practice leads us on to consider the notion of 'the teacher as researcher'. While the idea that teachers should be regarded as researchers, or as practitioner-researchers (see Robson, 2002, Appendix B), is now becoming increasingly popular, several authors point out that this is not a recent idea. Hopkins (2002) offers a concise account of the origins of the teacher research movement, beginning with the work of Lawrence Stenhouse, who directed the Schools Council's Humanities Curriculum Project and authored a number of key publications, including An Introduction to Curriculum Research and Development (1975) and 'What counts as research?' (1981).

Substantial contributions to the development of teacher research were also made by John Elliott and Clem Adelman through the Ford Teaching Project, which involved 40 primary and secondary school teachers completing action research projects that focused on classroom-based practice. As Hopkins (2002, pp. 1–2) points out: 'These teachers developed hypotheses about their teaching which could be shared with other teachers and used to enhance their own teaching'. More recent initiatives in advancing the cause of teacher research include the proposal that teaching should move increasingly towards being a research-based profession (Hargreaves, 1996). This would involve practitioners undertaking research activity as an important aspect of their role, with a view to gathering data about a range of issues including strategies for effective learning and teaching.

Rose (2002, p. 45) summarizes some of the key arguments offered by Stenhouse (1981) in the article referred to above. It is interesting to note, over twenty years later,
the extent to which these themes are now very much in vogue. Stenhouse suggests that teachers should be at the forefront of educational research and that classrooms provide an ideal context within which to test educational theories. Unless teachers are fully involved in research being undertaken, he argues that they will not wish to be consumers of the findings that emerge from it. Furthermore, teachers have lacked opportunities (other than those offered within higher degree courses) to take on a more substantial role in the research process. Finally, on the traditional view of educational research, practitioners have been asked to justify themselves and their practices to researchers. However, according to Stenhouse, it is researchers who should be offering justifications to practitioners.

In recent years, the nature and purposes of educational research have been the focus of critical scrutiny (see Hillage et al., 1998; Tooley with Darby, 1998; and responses by Atkinson, 1998; Edwards, 1998; Lomax, 1998; and Valliyan, 1998). Criticisms made of such research, from a variety of resources, include the following (see, for example, Hargreaves, 1996; Rose, 2002). First, there is a widening gulf between researchers and classroom practitioners, and research often fails to focus on ‘the real life experiences of most teachers’ (Rose, 2002, p. 44). Second, for the most part, research is an activity or series of activities which is done to practitioners, rather than by them. Third, the findings of research are often written in obscure journals, that are inaccessible to teachers both in terms of the style in which they are written and their location (usually the library of a higher education institution (HEI)). This is inconsistent with a central aim of educational journals: to improve practice in schools and classrooms.

How are we to respond to these criticisms? It seems to me that the best way to do so involves demonstrating the important effects that teacher research in general, and action research in particular, may have both on school improvement and on practitioners’ professional development. As regards the first issue, Rob Halsall (1998) outlines the case for teacher research as a strategy for school improvement. Interestingly, the sub-title of his book is Opening Doors from the Inside and the volume contains a number of case studies (some written by teachers themselves) that outline the impact of research at whole school, department and classroom levels (see also Carter and Halsall, 1998).

The relationship between research and teachers’ professional development is a close one. At the present time, a welcome and much-needed debate is taking place about the nature of continuing professional development (CPD) for teachers and how this might be improved. For example, the General Teaching Council for Wales (GTCW) (2002b), in a document entitled Continuing Professional Development: An Entitlement for All, has offered draft advice to the National Assembly for Wales concerning a range of issues.

The GTCW argues that ‘all teachers should be entitled to high quality and well-planned CPD provision throughout their career’ (para. 19). However, such an entitlement carries with it certain responsibilities: ‘to develop oneself professionally and to ensure that professional knowledge and skills are constantly updated’ (para. 19). It is noted (para. 14) that: ‘CPD activities take many forms. These range from attending courses to school-based learning and undertaking action research’.

Three excellent examples of action research projects to support teachers’ CPD are Best Practice Research Scholarships (BPRS) and the Teacher Research Grant Scheme in England, and Teacher Research Scholarships (TRS) in Wales. As regards BPRS, qualified teachers currently serving in schools (including nursery, independent and non-
maintained schools) are eligible to apply. It is suggested that they will benefit from the opportunity to:

Enhance their own professional and personal development.
Enable collaborative work with their colleagues to take place.
Raise their own profile among their peers.
(www.teachernet.gov.uk/Professional_Development/opportunities/bprs)

Funding of up to £2500 is awarded to support the development of research projects that focus on classroom practice. As a condition of proposals being accepted, a tutor or mentor must be appointed to assist teachers in completing research projects successfully. Offering some expertise in research methodology, the tutor/mentor is required to make a formal statement indicating how and when he/she will support projects being undertaken, as well as monitor, evaluate and help to disseminate research findings. The above website offers an archive of small-scale research studies undertaken through the BPRS scheme.

For several years, beginning in 1996–7, the Teacher Training Agency awarded grants for classroom-based research under its Teacher Research Grant Scheme. An archive of completed projects is available, containing titles such as the following:

The Role of Handwriting in Raising Achievement;
The Use of ‘Diagnostic Probes’ to Aid Teaching and Learning in Science;
Developing Skills in Mathematical Explanation;
The Influence of the Head of Department on the Quality of Teaching and Learning;
Developing Individual Education Targets within Whole School Assessment Procedures;
Extending Children’s Spelling Strategies;

How Can Primary Schools Encourage Boys to Develop a More Positive Attitude Towards Learning?;
The Use of ICT in Music Composing;
Teaching Writing in a Foreign Language;
The Teaching of Reading in Years Six and Seven.
(www.canteach.gov.uk/community/research/grant/index.htm)

The GTCW TRS scheme commenced in 2001–2. Funding of up to £3000 is available to teachers to enable them to undertake action research projects, supported (as in BPRS) by a tutor/mentor. Examples of possible research areas include (GTCW, 2002a, p. 15): raising standards; introducing new ideas into classroom practice; effective links and pupil transition between primary and secondary phases; behaviour management and tackling disaffection; and the use of technology in education.

I have acted as a mentor to two groups of teachers who received GTCW scholarships. The first group, based within Wrexham LEA, undertook action research projects in a broad range of areas. The second, also sponsored by the National Union of Teachers, completed projects on the teaching and learning of thinking skills in infant and secondary schools. This involved attendance at two residential seminars, where teachers were introduced to aspects of research methodology, issues relating to thinking skills, the development of research projects, data collection and analysis, and writing research reports.

The GTCW TRS scheme was evaluated in two ways. First, a comprehensive report was produced by David Egan and Roy James (2002). This involved the development of an evaluation pro forma for teacher researchers; a questionnaire concerning the effectiveness of the scheme, which was sent to their head teachers; a questionnaire for tutors/mentors; and a series of interviews
with teacher researchers, head teachers and line-managers. The report indicated the following benefits to teachers from undertaking action research projects (p. 15): the development of individual needs and skills; motivational and career factors; engagement with good practice; time to develop reflective practice; work-based learning; working collaboratively with other professionals; and learning and teaching gains.

In addition, I undertook my own evaluation of the impact of TRS on enhancing teachers' professional development. Following the evaluation pro forma produced by Egan and James, I asked the following questions:

How effective do you consider the chosen activity to be in enhancing your professional knowledge, skills and expertise? Please circle your response (1 = very effective; 4 = very ineffective)

1  2  3  4

How could you further develop the work you have undertaken? Please specify.

All respondents indicated that their chosen activity was 'very effective' in enhancing their knowledge, skills and expertise. Written comments included the following:

It has made me look at what I do 'day in, day out'. I haven't really been doing anything new, but I have become aware of what I'm doing and have looked at the results of my strategies in the teaching and learning process. I have probably become even more aware of the needs of the pupils I teach and the need to continue to look for new ideas. I have most certainly become more confident in myself and it has given me the 'feel good factor'. I would like to move on ...

Time to read and research. Networking and sharing practice. Focus on mentoring: I feel confident to undertake more research. Focus on learning and teaching in general: I have adapted ideas from target groups to other classes.

The research project has been excellent in enhancing my professional development, as prior to this I was not even aware of what thinking skills were, let alone being able to implement them in my classroom. It is also an opportunity to undertake research which is directly related to improving teaching and thus learning.

Very effective. The first course produced new ideas. The research process helped me to develop thinking skills strategies and spread them through the Faculty. It improved my skills and those of other teachers within the Faculty.

Responses to the second question included the following:

I would like to have the opportunity to 'spread' my experiences across the school and to work with other teachers within the LEA and further afield. I would like to be supported in doing some further written work (e.g. a teacher's handbook for classroom management).

Adapt my research and findings to other areas of the scheme of work.

I wish to develop further thinking skills strategies within the classroom and perhaps extend to a whole school approach across key stages. It would also be useful to do another research project which could build on the one already undertaken – perhaps to implement thinking skills across the curriculum.

I would like to form a working group within the school to develop thinking skills activities across the curriculum, in order to spread good practice.

I now want to continue my research and spread good practice across the whole school. Thinking skills should be a key area in whole-school curriculum development. I personally would like to initiate this and research my findings.

Develop professional debate among staff to enhance the learning community.

The GTCW (2002b, para. 26) suggests that 'Conditions need to be created ... to allow [teachers] to be reflective – to learn, develop, and improve as an integral part of their work'. Furthermore, 'There is a need to provide
teachers with time to plan, undertake, reflect [on] and disseminate their experiences. This best takes place in environments that foster learning.

The importance of action research

In order to answer the question ‘Why undertake action research?’ I have examined several related issues. Considering these together enables us to offer several statements indicating the importance of action research. To begin with, reflective practitioners are concerned with studying their own practice and action research provides an excellent medium for this to take place. Second, action research enables practitioners to explore relationships between educational theory and practice. Third, the critical scrutiny of educational research has led to an increasing emphasis on the importance of practitioners undertaking their own research studies. Fourth, a move towards developing teaching as a research-based profession should lead practitioners to:

1. take an increasingly prominent role in the processes of gathering and analysing research data, and reporting research findings;
2. complete action research projects regularly (and not only as part of higher degree courses).

Finally, action research can have a beneficial impact both on school improvement and on the professional development of teachers. The development of action research projects will be discussed in Section 3.

3

How Do I Develop an Action Research Project?

In order to illustrate the development of an action research project, including data collection and analysis, I shall outline three extended examples in sections 4 and 5 of this book. However, my purpose here is to focus on some general issues concerning: choosing a research topic; developing a research proposal; relationships between educational theory and practice; and the content of research methodology courses or seminars.

Developing an action research project

In focusing on the central question: ‘How do I develop an action research project?’ you may already have a research topic in mind. If this is not the case, you might like to consider possibilities for research outlined by, for example, Bassey (1998, pp. 96–107) and Macintyre (2000); Wragg (1994, pp. 103–4). As Wragg indicates, there is a wide range of potential research topics. These include:

- What teachers and pupils do in classrooms: ‘How do they spend their time?’
- Classroom talk: ‘Who talks to whom about what?’
- Classroom management: ‘What are the classroom
rules, how are resources, time, space, pupil behaviour, their own teaching strategies managed?

Pupils' learning: determining the tasks engaged in by pupils, the extent of their involvement in such tasks and degree of success in completing them.

Pupils with special educational needs: the educational experience of very able pupils and those with learning difficulties.

Teachers' professional development: how can they improve their own teaching?

Monitoring and assessment of pupils' work.

Group work: the processes involved in (and educational outcomes arising from) pupils working in groups; the nature of assignments undertaken; decision-making procedures; the extent of collaboration between pupils.

Once you have determined an appropriate subject or context for research, it is necessary to draw up a research proposal. Usually, this will be reviewed by your supervisor (or, in certain circumstances, by a review committee). However, if you are undertaking a funded research project, you will be required to submit a proposal to the funding body.

In preparing an action research proposal for your supervisor, you may be asked to write a brief outline (no more than two or three A4 pages) containing the following information:

- your name;
- a tentative title for the project (this may be amended in consultation with your supervisor);
- the aims of your project;
- possible research questions for your project;
- the educational setting or context within which your project will be undertaken;

the period of time within which your project will be undertaken;

the research methodology you propose to use;

anticipated outcomes of your research;

an outline bibliography.

This information will provide a context for your first meeting with your supervisor. Putting it together in the way I have suggested will involve you in some preliminary reflection and research. This is an essential aspect of the process and a thorough approach at this stage will enable you to develop a solid foundation for the project as a whole.

To begin with, you need to undertake a literature search. The purpose of this is to establish whether the research topic you are proposing is a viable one. If you are unable to gain access to a sufficient amount of reading, both to deepen your understanding of the chosen field of study and to underpin the research you will undertake, your supervisor or the review committee is likely to suggest that you choose a more appropriate topic. Having completed the literature search, you can begin the process of literature review. This is necessary because your action research project needs to demonstrate relationships between educational theory and practice, which involves examining critically what authors have to say about educational issues, and applying the reasons, evidence, arguments or proof they offer to the practical context of the classroom, school or other educational setting.

In reviewing the relevant literature (books, chapters in edited books, journal articles, Internet sources, etc.), an important aim is to enable you to offer answers to key questions such as: 'When authors tell me what is happening (or should) happen in, for example, a classroom, does this coincide with my own experience? If yes, why? If
no, why not? As a result of this review, do I need to introduce appropriate change into my classroom? If yes, how might I do this?

At your first meeting with your supervisor, you will have an opportunity to: discuss your proposal; indicate why you think it is an important area for research; outline its key aims; and convince the supervisor that you have access both to an appropriate educational setting (e.g. a classroom) and to sufficient theoretical resources (books, journal articles, etc.) to complete the project successfully. During the meeting, your supervisor may suggest some amendments to your proposal or he/she may ask you to give further thought to aspects of it, with a view to finalizing the outline at the next meeting. As a result of these initial meetings, you will produce an agreed strategy for undertaking the project.

At this stage, you may have a number of queries about your research and it is important to make your supervisor aware of these. Never be afraid to ask questions; these are essential to ensuring a successful outcome for your work. There are several reasons why you may be reluctant to ask your supervisor to clarify key issues. First, you may not wish your supervisor (or anyone else) to know that you require additional guidance or support. Second, you may have several questions and do not wish to trouble your supervisor with them. Third, you may not wish to ask questions in front of your fellow practitioners. Fourth, you may be generally unsure both about what is required of you and about how to indicate this uncertainty to your supervisor.

Whatever the reason for such reluctance, you should avail yourself of all opportunities that are provided to meet your supervisor and to articulate any concerns you may have. By doing this, you are much more likely to complete your project successfully. In addition, you may save both yourself and the supervisor a great deal of time in the long-term because regular discussions should lead to fewer errors or misconceptions either in developing or carrying out your research.

If you do not wish to ask questions in front of others, arrange to meet your supervisor to discuss these or see him/her during a seminar break or at the end of a teaching session. Never assume that your questions are so naïve or lacking in complexity that you would be reluctant to ask them. Please remember that your supervisor is as concerned as you are to ensure your success. Eliminating uncertainties at the beginning of a project, or as they arise once it is underway, will do much to accomplish this goal.

The importance of research methodology seminars

In order to enable you to complete your research project, it is usual for HEIs to provide modules or a series of seminars on research methodology. Typically, these focus on topics such as: undertaking a research project; working with your supervisor; choosing an appropriate research methodology; reading for, planning and writing your thesis; citation and referencing; and presenting your research project.

I have already outlined some aspects of working with your supervisor. In addition, it is important to attend research methods seminars (if these are provided) and again to ask questions when you are unsure about anything that is being discussed or outlined. When teaching research methodology courses, I begin by offering students a sheet with three headings:

1. Things I know about undertaking the research project.
2. Things I am not sure about in undertaking the research project.
3. Things I would like to know about undertaking the research project.

They are invited to write up to five comments under each of these. Then I collate responses and ensure that all aspects mentioned under the latter two headings are discussed. During the final seminar, there is an opportunity for course members to ask any remaining questions and for me to revise key themes as necessary. Issues and questions commonly raised in the first seminar are:

I'm not sure what a research project is.
What are the differences between a project and an assignment?
What is action research?
Am I the only one who feels apprehensive about tackling a research project?
What is the best way to start?
What am I going to focus on?
From whom should I seek help/advice?
How much time will I have with my project supervisor?
Will I be given assistance to get started and have the opportunity to discuss the project on a one-to-one basis?
Will I be supervised so that, if I am in danger of going wrong, I will be told and helped well in advance of the hand-in date?
Can I see completed research projects?
What kinds of question should I be asking?
Is classroom-based research optional, necessary, essential?
Do I have to undertake interviews/questionnaires?
Does every chapter have to have a title?
How should I go about research and incorporate it into my project report?

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I am worried about: (1) plagiarism; (2) use of other people's ideas and putting them in my own words.
Use of quotation/citation in the text.
Can we use footnotes or will we use the Harvard system of referencing?
Presentation of the bibliography.
Do I need appendices? Where do I put them in my research report?
Is my project title appropriate? Should the title be a question or a statement?
How should I use my school experience placements/teaching experience in developing my project?
Relationships between educational theory and practice.
How often should I quote?
What should the conclusion contain?
Where do I find information/resources?
Continuity between chapters.
Presentation of the report.
How do I get a good grade?

Your own HEI will provide you with a set of guidelines concerning the completion of the research project. If, having reviewed these guidelines, you have questions about them, or about any of the issues and questions outlined above, please ask your supervisor for clarification.

While you are undertaking your project, your supervisor will wish to meet you, either individually and/or with a small group of other researchers, in order to review your progress. As I have indicated above, attendance at such meetings, whether or not they are compulsory, is also important to your success and allows your supervisor to determine whether you need additional guidance in completing the research. As your work progresses, you may be asked to:
1. submit draft chapters for your supervisor to read and comment on;
2. produce a complete draft of your report before submitting the final version.

Again, although this may be optional, it is important to take advantage of the opportunities that are being offered.

If you are undertaking a funded research project, your proposal to the funding body is likely to have a format which is similar to that outlined by the GTCW (2002a). Applicants for TRS are asked to complete a proposal of between 500 and 700 words which outlines the following: the title of the research project; the aims of the research project; a statement concerning how the research project will help to raise educational standards; the expected outcomes of the research project, both for the researcher and his/her school; the research methodology to be used; the timescale and schedule for the research project, including anticipated milestones; how the research undertaken will be evaluated; and the total funding requested, together with a breakdown of costs to be incurred.

Funding bodies usually require researchers to have academic support in undertaking their projects. This is provided by a mentor from a local education authority, HEI, subject association, or research body, etc. The mentor may assist researchers to develop their initial proposal, as well as offering guidance through regular meetings, workshops, residential seminars, or via email correspondence. Mentors may also agree to read and comment on work in progress, including draft copies of research reports.

Funded projects differ in one important respect from those undertaken as part of a course of study for an academic qualification: they are primarily practical pieces of research. Given this, practitioners are not expected to undertake a formal review of the relevant literature before completing their studies. Nevertheless, some engagement with the literature may be very beneficial, as it is likely to suggest possible topics or themes for research, as well as deepening the researchers' knowledge and understanding of key aspects of the work to be undertaken.

In the next section of this book, I shall discuss a number of possible criticisms that may be made of action research. In attempting to counter these, I shall argue that researchers should endeavour to make their work as rigorous as possible. Examining the relevant literature, even if only briefly, and applying some of the insights derived from it to the context of current or proposed projects, should lead to more rigorous research being completed. This is the best way to respond to those sceptics who are doubtful about the value of small-scale practitioner research.

Before outlining the three action research projects I mentioned at the beginning of this section, I want to return to the list of issues and questions commonly raised by undergraduate and postgraduate students. If you are unsure about what a research project is, guidance will be provided either in research methodology seminars, or by your supervisor. Basically, a research project is a long essay in which you undertake:

1. a critical review of the relevant literature concerning your proposed topic;
2. practical research within a classroom, school or other educational setting.

Projects may vary in length both between academic courses and HEIs.

One difference between a project and an assignment is that the former tends to be a longer piece of work. When
faced with writing a research study of several thousand words, it is quite natural to feel some apprehension. However, this can be significantly reduced through attendance at appropriate seminars, by working closely with your supervisor in the ways I have suggested above, and by looking at examples of successfully completed projects.

You should be given opportunities to examine research reports produced by students in previous years. This may be a formal part of a research methodology course, or you may be asked to look at projects in your own time (they may be housed in your HEI's library). This is a valuable exercise as it gives you the opportunity to consider questions such as:

What are appropriate topics and titles for research projects?
What do successful research project reports look like (format, contents, presentation etc.)?
How are chapters or sections of project reports structured?
How do chapters or sections of project reports relate to each other?
Do researchers provide reviews of the relevant literature?
Do researchers justify their choice of research methodology?
How do researchers gather data?
How do researchers analyse data?
How are research project reports presented?

Having produced a proposal and agreed its basic content and structure with your supervisor, you should write a draft chapter (often a review of the literature). The feedback you receive from your supervisor will be useful because it should: confirm whether or not the chapter is

of an appropriate standard for success; indicate those aspects of the chapter which are satisfactory or better as they stand; outline those aspects where improvements could be made; detail those aspects which require further work. At this stage, it is advisable to consider carefully the advice that you are given. If you are unsure about any aspect of it, please consult your supervisor. Once you have made appropriate amendments, a second draft should be submitted, together with the first. Sending both versions to your supervisor will enable him/her to see quickly how you have responded to the suggestions made.

**Undertaking action research projects: some preliminary considerations**

Prior to proceeding with your action research, I suggest that you should:

Undertake reading on research methodology (the bibliography of this book provides a good starting point). Consult completed research project reports.
Undertake a literature search, enabling confirmation (both to yourself and to your supervisor) that you have access to a sufficient amount of educational theory to underpin your research. Note that a literature search, though not required for small-scale funded research, may be very useful.
Write an outline of your proposed project, including a rationale for it and an account of your suggested research methodology.
Detail the contents of your research project report, either chapter by chapter or section by section (this may be amended during your research).
Having begun your research project, you should:

Meet your supervisor/mentor regularly to discuss your project.
Produce individual draft chapters/sections of the project report for your supervisor to read. This is preferable to submitting several chapters/sections at the same time because, if there are problems with one chapter, it is likely that these will be replicated in other chapters too.
Ensure continuity between chapters or sections of the project report. I shall discuss this further in Section 6.

In the following section, issues concerning the collection of action research data will be explored.

4

How Do I Collect Action Research Data?

Here and in the following section, I shall outline three invented examples of action research projects. In devising these examples, my aim is offer illustrations that demonstrate the following: relationships between educational theory and practice; relationships between quantitative and qualitative research; a variety of approaches to collecting action research data; and rigour in action research.

Collecting action research data: some preliminary considerations

Before undertaking an action research project and collecting data, you should be aware of the main criticisms that have been made of action research as a mode of enquiry (for example, the prescriptive nature of its models, as discussed in Section 1). If you are completing a project as part of a course of study for an academic qualification, you will need to demonstrate your understanding of these criticisms. You will also need to offer suggestions as to how action researchers in general (and you in particular, in the context of your own research) have sought to overcome them. Depending on the nature of your study, it may also be important to explore some
problems associated with the practice of educational research in its broadest sense, and these I have discussed in Section 2. Concerns about and criticisms of action research have tended to focus on: ethical concerns associated with undertaking action research projects; rigour in action research; and the generalizability of findings from action research projects. Let us examine each of these in turn.

Denscombe (1998, p. 63) outlines a number of ethical issues that practitioners should consider when undertaking action research projects. He argues that a particular problem facing action researchers concerns the fact that while their projects tend to focus on their own activities, ‘it is almost inevitable that the activity of colleagues will also come under the microscope at some stage or other’. This is because practitioners do not work in isolation: ‘Their practice and the changes they seek to make can hardly be put in place without some knock-on effect for others who operate close-by in organisational terms’ (p. 63) (see also Denscombe, 2002, Chapter 9).

What are the implications of this for researchers? First, they should distinguish between undertaking action research that is personal to themselves and focuses on their own practice, and research that relates to, and impacts on, the work of others. Where the latter is inevitable, ‘the usual standards of research ethics must be observed: permissions obtained, confidentiality maintained, identities protected’ (Denscombe, 2000, p. 63). Denscombe suggests that practitioners should be open about their research and that they should ensure that those involved in it give informed consent to what is being proposed. In particular, permission should be sought before researchers engage in any form of observation or examine documentation that may have been produced for purposes other than the research project.

Section 6 of this book focuses on the question: ‘How do I produce an action research report?’ Here, too, as Denscombe acknowledges, ethical considerations are important, since researchers should ensure that any descriptions of others’ work or the viewpoints they offer (for example, during interviews) must be agreed with the parties concerned before reports are submitted for examination or publication.

Critics of action research often refer to a perceived lack of rigour in studies undertaken. This is not intended, primarily, as a criticism of individual researchers or of the work they have completed; rather it might be seen as a direct attack on the nature of action research itself. So what are the problems to which critics refer and how might action researchers respond to them? To begin with, it has been suggested (Hopkins, 2002, p. 51) that an overuse of words like ‘problem’, ‘improve’, ‘needs assessment’, etc., ‘could give the impression that action research is a deficit model of professional development’. In other words, ‘Something is wrong, so do this to make it better’.

I agree with Hopkins that action research offers practitioners a powerful tool to enhance their ‘professional confidence’ and so, with this in mind, it is important to attempt to speak and write about school-based research as positively as we can. However, Wragg (1994, p. 111) distinguishes between two kinds of action research, which he calls ‘rational-reactive’ and ‘intuitive proactive’. In the first, the researcher examines what is occurring (in a classroom, for example) ‘usually with a specific focus on something known to be a problem or in need of improvement, and then draws up a programme to react to what has been discovered’. The second type of action research is undertaken by practitioners who know, ‘or think they know, what needs to be done, and so implement an intervention programme first and then visit classrooms to
see how well it is progressing’ (Wragg, 1994, p. 111). These distinctions are important because they draw attention to different ways of utilizing action research to achieve educational goals. It is often the case that particular problems identified within a classroom or school may be tackled effectively through a sharply-focused research study. However, it is important to remember that this is not the only purpose which action research may serve. As Hopkins (2002, p. 51) indicates, it ‘provides teachers with a more appropriate alternative to traditional research designs and one that is, in aspiration at least, emancipatory’.

The notion of a ‘traditional research design’ is an interesting one, not least because action research has frequently been compared unfavourably to it. In attempting to find out why this is the case and whether such a comparison is justifiable, we need to examine relationships between quantitative and qualitative research. Blaxter et al. (1996, p. 60) offer concise explanations of these approaches. They suggest that quantitative research is ‘concerned with the collection and analysis of data in numeric form. It tends to emphasise relatively large-scale and representative sets of data’. However, qualitative research ‘is concerned with collecting and analysing information in as many forms, chiefly non-numeric, as possible’. The authors note that quantitative research is regarded or represented (mistakenly in their view) as attempting to collect ‘facts’, while qualitative research aims to explore in great detail ‘smaller numbers of instances or examples which are seen as being interesting or illuminating, and aim to achieve “depth” rather than “breadth”’. Although Dick (2000) suggests that action research is often qualitative in nature, it is possible, as we shall see, for practitioners to use both quantitative and qualitative methods in undertaking their research projects. This is a necessary approach because, as Wragg (1994, p. 9) argues: ‘While the counting of events may offer some interesting insights it falls far short of telling the whole story of classroom life’.

Although acknowledging that there is no ‘watertight’ distinction between these two approaches, Denscombe (1998, pp. 174–6) suggests that quantitative research tends to be associated with: numbers as the unit of analysis; analysis; large-scale studies; a specific focus; researcher detachment; and a pre-determined research design. On the other hand, qualitative research tends to be associated with: words as the unit of analysis; description; small-scale studies; a holistic perspective; researcher involvement; and an emergent research design.

Arguments have been advanced against the rigour of action research on the grounds that: it is primarily qualitative in nature; it is susceptible to ‘researcher bias’ because practitioners often engage in the study of their own practice; it usually involves undertaking small-scale studies (often of a particular classroom or school); and, given the very limited scope of typical action research projects, results obtained from these studies should not be regarded as generalizable beyond their individual contexts.

How might action researchers respond to these criticisms? The best way to begin is by acknowledging that when undertaking research of any kind, it is important that the results deriving from it are sound. Robson (2002, p. 93) discusses how the trustworthiness of research is usually established. In attempting to convince your audience (and yourself) that your findings are significant, he suggests that you should ask several questions: ‘What is it that makes the study believable and trustworthy? What are the kinds of arguments that you can use? What questions should you ask? What criteria are involved?’ In offering answers to these questions, Robson refers to
several important concepts that are usually associated with ‘traditional’ research:

Validity. This is concerned with ‘whether the findings are “really” about what they appear to be about’ (Robson, 2002, p. 93) or, in Bell’s words (1999, p. 104), ‘whether an item measures or describes what it is supposed to measure or describe’.

Reliability. This refers to ‘the consistency or stability of a measure; for example, if it were to be repeated, would the same result be obtained?’ (Robson, 2002, p. 93).

Generalizability. This refers to ‘the extent to which the findings of the enquiry are more generally applicable outside the specifics of the situation studied’ (Robson, 2002, p. 93).

At this stage, it is important to:

1. determine the extent to which these terms have any applicability to action research;
2. establish how researchers might endeavour to ensure that their studies are as rigorous as possible.

As Robson notes, concepts such as ‘validity’, ‘reliability’ and ‘generalizability’ were initially utilized within the context of traditional ‘fixed-design’ research, where the aim was to collect quantitative data. Given this, there is a substantial debate as to whether they are applicable to ‘flexible-design’ research aiming to gather qualitative data (see Chapters 5 and 6 of Real World Research (Robson, 2002) for discussions of fixed and flexible designs).

Robson refers to the close relationship that exists between action research and qualitative, flexible-design research, and outlines a number of factors that may lead us plausibly to use the term ‘validity’ in the context of such investigations. Claiming that a piece of qualitative research ‘has validity’ is, as Robson (2002, p. 170) rightly suggests, to refer to it as ‘being accurate, or correct, or true’. While acknowledging that it is difficult (if not impossible) to verify these characteristics with certainty, he suggests that ‘An alternative . . . tack is to focus on the credibility or trustworthiness of the research’. How are these to be determined? Robson refers to a number of strategies for dealing with threats to the validity of a piece of research. These include:

- prolonged involvement in the study (which may take place over weeks or months: ‘much longer than is typical in fixed methods research’ (Robson, 2002, p. 172));
- triangulation (for example, the use of more than one method of data collection, or more than one observer in the research, or drawing on both quantitative and qualitative approaches);
- negative case analysis (‘As you develop theories about what is going on [in your research], you should devote time and attention to searching for instances which will disconfirm your theory’ (Robson, 2002, p. 173);
- audit trail (keeping a complete record of your research while carrying it out; this includes raw data such as completed questionnaires, interview transcripts and field notes, audiotapes and videotapes, as well as your research diary or journal – see Robson, 2002, pp. 1-2).

While prolonged involvement in a piece of research may (at least potentially) increase the risk of researcher bias, triangulation, negative case analysis and an effective audit trail may all help to reduce it. Robson also suggests that a researcher’s prolonged involvement in a study may help to reduce respondents’ bias. This is due to the likely development of a trusting relationship between researcher and respondent, which may decrease the possibility that the latter will provide biased information.

Prolonged involvement, triangulation, negative case
analysis and audit trail are strategies that, if adopted collectively, can reduce substantially possible threats to validity. In this way, the credibility or trustworthiness of the research undertaken is enhanced. In addition, an audit trail offers evidence that you are being careful, systematic and scrupulous about your research. These are important considerations when you are making the case for its reliability.

As regards generalizability, Robson (2002, p. 176) refers to the work of Maxwell (1992, 1996) who distinguishes between ‘internal’ and ‘external’ generalizability. These refer respectively to the generalizability of conclusions within and outside the setting being researched. As regards the former, unjustifiable selectivity on the part of researchers (for example, in terms of choosing interviewees, or potential respondents to a questionnaire, or particular contexts for observation research) will substantially increase the possibility that their accounts will exhibit bias.

Robson (2002) points out that some projects may not seek external generalizability. This is commonly the case with small-scale, funded action research studies, as well as those undertaken within the context of most undergraduate and postgraduate courses. Therefore, it is unwarranted to criticize a piece of research in terms of its lack of generalizability when this is neither a stated goal for the work being conducted, nor an explicit intention of the researcher who carries it out. This is not to deny that small-scale action research does not have the potential for generalizability. For example, if researchers share details such as the context of and planning for their studies in their reports, readers can explore the relevance of these aspects to their own research. As Macintyre (2000, p. 66) indicates, ‘This makes generalisation a much more serious possibility’. For a discussion of bias, reliability, validity and generalizability, within an action research framework, see Macintyre, 2000, pp. 48–50 and 66).

Dick (1993) details a number of procedures that you may use in order to achieve rigour in your research. These include: using multiple sources when collecting data; continually testing your assumptions; seeking exceptions in cases of apparent agreement and explanations in cases of apparent disagreement; and being willing to challenge your own ideas. As regards the latter three points, please remember that these apply both in the context of your general reading and fieldwork (or practical research).

**Examples of action research projects**

Examining the above issues carefully enables you to develop a solid foundation for your action research project. In order to illustrate how this might be developed, I shall set out three examples using Denscombe’s (1998) action research model. In Section 1, I suggested that this could be represented in several ways and offered one example (see Figure 1.3). I also noted that Hopkins (2002) rightly draws our attention to difficulties which may arise if action research models are offered to practitioners in a prescriptive manner. Given this, I suggest only that the above framework may provide a useful tool with which to undertake an action research project. Its viability will depend entirely on the outcomes of its use within particular settings. Earlier in this section, I also referred to Hopkins’ concern about a possible overuse of words such as ‘problem’, ‘improve’, etc. With this in mind, I suggest that the word ‘problem’ in Denscombe’s model should be considered as an ‘umbrella’ term to include the research issue, question, or hypothesis to be examined.
Example 1: Developing an effective school governing body: an action research project

The research project begins with the premise that an effective governing body is essential to the success of a school. Given this, practitioners may be interested to investigate issues such as: how governors’ meetings are managed; the agenda items discussed by governors; the length of time taken up by discussions of individual topics; the level of participation by individual governors, etc. This research might be carried out by, for example, undergraduate or postgraduate students, teachers completing funded research projects; and head teachers wishing to find out whether meetings of their schools’ governing bodies are being well managed and whether members are participating as fully as possible.

For the purposes of this example, we shall assume that it is the head teacher of a secondary school, Mrs A, who wishes to undertake the project. She has been in the post for three years and has attended all meetings of her school’s governing body (stage 1: professional practice). Although she usually speaks fully concerning all agenda items, Mrs A has become aware that some members rarely participate in discussions. Furthermore, during her informal conversations with governors, many suggested that meetings were too lengthy and that excessive amounts of time were devoted to administrative matters. When asked why their level of participation was low, some made statements such as:

- ‘I am never invited to speak’ (student representative).
- ‘I find these meetings rather dull and boring’ (councillor).
- ‘I know very little about many of the topics being discussed’ (company director).
- ‘Mrs B usually speaks on behalf of both of us’ (parent governor).
- ‘I see my role as being to offer support as requested’ (staff representative).

Mrs A reflects critically both on her own experience of governors’ meetings and the feedback she has received from individual members of the governing body (stage 2: critical reflection). She decides to initiate an action research project with the following aims:

1. To explore the nature and extent of participation in school governors’ meetings.
2. To seek the views of members of the governing body about their participation in meetings.
3. To seek the views of members of the governing body about how meetings might be made more effective.
4. To implement change as appropriate (with a view to developing a more effective school governing body).

After consultation with colleagues from her local education authority and HEI, Mrs A agrees to formalize her research by making an application for a Teacher Research Scholarship and receives a grant of £3000. Although not required by the terms of the research to undertake a literature search, she is keen to find out as much information as possible about:

1. school governing bodies;
2. research methodology.

She gains access to her HEI’s library database and undertakes several ‘key word’ searches (e.g. ‘school governors’; ‘school governing bodies’; ‘effective schools’; ‘school leadership’; ‘educational management’) to find important source material (books, journals, Internet websites, etc.). Mrs A then visits the website of the Department for Education and Skills to ascertain whether additional information is available from the School Governors’ Centre (www.dfes.gov.uk/governor/index.cfm). She finds a number of interesting publications and then moves on to consider some basic texts on research methodology.

While reading a chapter on ‘Observation Studies’ in Bells’s Doing Your Research Project: A Guide for First-Time Researchers in Education and Social Science (1987, p. 95), Mrs A finds an observation chart which offers an account of a
school governors' meeting, including agenda topics and the extent of individual governors' participation. She decides to adopt this approach as one means of gathering data for her own research study and invites a lecturer from the local HEI to observe the next meeting of the governing body (stage 3: research).

In order to do this (and following Bell’s guidance), the lecturer takes some sheets of lined paper and marks each line as representing one minute. Within a generous vertical margin, agenda items and the starting times for their discussion are indicated. Speakers' initials are written in the margin each time they make a contribution to the meeting. Brief notes about the discussions taking place are included on the sheet and a single line is drawn after each agenda item has been completed. A summary sheet, containing the information obtained from the meeting, is then produced.

Mrs A would like the research project to be as rigorous as possible and so decides to supplement the data gathered from the initial observation. She does this in three ways:

1. repeating the observation;
2. developing a questionnaire which is sent to all members of the governing body;
3. interviewing a smaller sample of the group (stage 3: research).

The research instruments used by Mrs A (observation chart, questionnaire and interview schedule) will be discussed in the next section.

Example 2: Developing questioning in organizations: an action research project

The research project begins with the premise that it is important for professionals working in a broad range of organizations to develop their questioning skills in order to:

1. improve the quality of their own thinking and practice;
2. improve the quality of colleagues’ thinking and practice;
3. enhance the learning and performance of individual groups within organizations;
4. enhance the learning and performance of organizations.

Given this, professionals may be interested to ask and find answers to the following questions:

- How often do I ask colleagues questions?
- What sort of questions do I ask?
- What can I do to increase the number, range and quality of my questions?
- What can I do to ensure a greater response to questions from my colleagues?

This research might be carried out by undergraduates, postgraduates, and professionals working in organizations. For the purposes of this example, we shall assume that it is a middle manager, Mr B, who works in a retail business and who wishes to undertake the project as part of his study for an MA in Management. He has been in his post for eight years and has a broad range of experience within his organization. He manages a team of 19 staff. At regular meetings, Mr B requests contributions from the group that focus on work undertaken, progress made, issues and problems that arise, etc. Mr B is keen to explore the role his questioning plays in enhancing the group's learning and development (stage 1: professional practice). Having reflected critically on his questioning (stage 2: critical reflection), Mr B considers himself to be someone who asks his colleagues a broad range of questions. He would like to find out whether his own perceptions of his questioning are confirmed through research and so decides to initiate a project with the following aims:
To ascertain how many questions are asked during a series of meetings covering a range of subjects.
To ascertain the nature of the questioning that takes place.
To ascertain which colleagues respond to questions.
To ascertain which colleagues do not respond to questions.
To implement change, as appropriate (focusing on: ‘What can I do to increase the number, range and quality of my questions?’ and ‘What can I do to ensure a greater response from my colleagues to the questions I ask?’).

Mr B gains access to his HEI’s library database and undertakes two initial ‘key word’ searches, ‘questioning’ and ‘asking questions’. These produce some interesting insights and areas for additional key word searches. To begin with, Mr B’s discovery of a book entitled *The Art of Asking Questions*, dated 1951, indicates that a concern to improve questioning skills is not a recent development. Given this, he decides to discuss, in one of the early chapters of his dissertation, the historical evolution of questioning in professional settings.

Second, his initial searches lead him to explore topics such as ‘reflective questioning’; ‘the questioning manager’; ‘effective questioning skills’; ‘questioning and explaining’; and ‘questioning and learning’. Further key word searches in these areas enable Mr B to gain access to a broad range of books, journals, Internet websites, etc. Finally, he undertakes some initial reading on research methodology.

While reading McGill and Beaty’s *Action Learning* (2001), Mr B finds a number of references to questions and questioning. He decides to gather research data using two methods (stage 3: research). The first involves a senior colleague observing his questioning during meetings in order to ascertain the number and nature of the questions asked. Mr B devises an observation chart using a category system that focuses on: open questions; closed questions; affective questions (‘How do you feel about . . .?’); probing questions (‘What aspects of your behaviour do you think might be relevant here?’); checking questions (‘What you plan to do is . . . Is that right?’); and reflective questions (‘In what way were your colleague’s questions confusing?’) (McGill and Beaty, 2001, pp. 128–9). He asks his colleague to indicate on the data sheet provided how many questions are asked in each category.

Mr B wishes to be as rigorous as possible in his research. In order to achieve this, he asks his colleague to observe a series of meetings, not just a single event. He also requests not to be given any feedback after each meeting, so as to ensure that his questioning style remains as consistent as possible. Mr B supplements the data collected in two ways. First, he develops a second observation chart. In its initial form, colleagues’ names are written in the left-hand column. Across the top row, numerals indicate the questions asked during a particular period. When Mr B asks a question and receives a response from a colleague, the observer writes ‘x’ in the appropriate box. Again, this chart is used in several meetings. Second, Mr B catalogues his research by maintaining a personal record of the process. These field notes detail key aspects of the meetings as seen from Mr B’s perspective. The observation charts developed in this study will be outlined in the next section.

**Example 3: Developing thinking skills in the early years classroom: an action research study**

The research project begins with the premise that young children should be taught critical thinking, reasoning and argument skills as part of the formal school curriculum. Given this, practitioners may be interested to ask and find answers to the following questions: What are ‘thinking skills’? Do we need to teach thinking skills in schools and, if so, why? What obstacles exist that may hinder such
teaching? How might thinking skills be developed in schools?

This research might be carried out by, for example, undergraduate or postgraduate students, and teachers completing funded research projects. For the purposes of this example, we shall assume that it is a trainee teacher, Ms C, who wishes to undertake the project during her school experience placement. Having attended a conference on the teaching of thinking skills, which was hosted by her HEI during the previous year, she wishes to gain experience of such teaching as quickly as possible (stage 1: professional practice). Having reflected critically on her last school placement (stage 2: critical reflection), where Ms C was able to teach three lessons with a thinking skills focus, and having already completed some basic reading on this topic, she decides to initiate a project with the following aims:

1. To discuss the nature of ‘thinking skills’.
2. To argue that thinking skills should be taught in early childhood education.
3. To outline those factors that may inhibit the teaching of thinking skills in early childhood education.
4. To implement a thinking skills programme with a class of 5–6-year-old pupils.

Ms C gains access to her HEI’s library database and undertakes several ‘key word’ searches based on her earlier reading: ‘teaching thinking skills’; ‘improving reasoning and argument skills’, ‘education for citizenship’, ‘personal, social and moral education’, ‘critical thinking’, and ‘the cognitive curriculum’. She finds a broad range of books, journals, Internet websites, etc., and undertakes some initial reading on research methodology.

Having read Costello’s Thinking Skills and Early Childhood Education (2000), Ms C decides to focus on developing young children’s moral thinking, through discussing episodes from Sesame Street videotapes with a class of 5–6-year-old pupils. In order to ensure that her research is as rigorous as possible, she chooses to gather data using two methods (stage 3: research). These are:

1. videotaping a lesson taught by her mentor, Mr D;
2. audiotaping two of her lessons and transcribing examples of the dialogues in which she engages with her class.

Ms C wishes to explore the processes of argument that children use when speaking. Accordingly, she amends a model of argument (outlined by Costello (2000, pp. 95–6) and presented in the next section) and analyses both the videotapes and audiotapes with a view to determining the extent to which pupils utilize these processes. Relationships between the collection and analysis of action research data will be examined in Section 5.