Research Methods in Education

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Introduction

One of the founding figures of action research, Kurt Lewin (1948) remarked that research which produced nothing but books is inadequate. The task, as Marx suggests in his Theses on Feuerbach, is not merely to understand and interpret the world but to change it. Action research is a powerful tool for change and improvement at the local level. Indeed Lewin’s own work was deliberately intended to change the life chances of disadvantaged groups in terms of housing, employment, prejudice, socialization, and training. Its combination of action and research has contributed to its attraction to researchers, teachers and the academic and educational community alike, demolishing Hodgkinson’s (1957) corrosive criticism of action research as easy hobby games for little engineers!

The scope of action research as a method is impressive. Action research may be used in almost any setting where a problem involving people, tasks and procedures cries out for solution, or where some change of feature results in a more desirable outcome. It can be undertaken by the individual teacher, a group of teachers working co-operatively within one school, or a teacher or teachers working alongside a researcher or researchers in a sustained relationship, possibly with other interested parties like advisers, university departments and sponsors on the periphery (Holly and Whitehead, 1986).

Action research can be used in a variety of areas, for example:

- *teaching methods* – replacing a traditional method by a discovery method;
- *learning strategies* – adopting an integrated approach to learning in preference to a single-subject style of teaching and learning;
- *evaluative procedures* – improving one’s methods of continuous assessment;
- *attitudes and values* – encouraging more positive attitudes to work, or modifying pupils’ value systems with regard to some aspect of life;
- *continuing professional development of teachers* – improving teaching skills, developing new methods of learning, increasing powers of analysis, of heightening self-awareness;
- *management and control* – the gradual introduction of the techniques of behaviour modification;
- *administration* – increasing the efficiency of some aspect of the administrative side of school life.

These examples do not mean, however, that action research can be typified straightforwardly; that is to distort its complex and multifaceted nature. Indeed Kemmis (1997) suggests that there are several schools of action research.1

Defining action research

The different conceptions of action research can be revealed in some typical definitions of action research, for example Hopkins (1985: 32) and Ebbutt (1985: 156) suggest that the combination of action and research renders that action a form of disciplined inquiry, in which a personal attempt is made to understand, improve and reform practice. Cohen and Manion (1994: 186) define it as ‘a small-scale intervention in the
functioning of the real world and a close examination of the effects of such an intervention. The rigour of action research is attested by Corey (1953: 6) who argues that it is a process in which practitioners study problems scientifically (our italics) so that they can evaluate, improve and steer decision-making and practice. Indeed Kemmis and McTaggart (1992: 10) argue that 'to do action research is to plan, act, observe and reflect more carefully, more systematically, and more rigorously than one usually does in everyday life'.

A more philosophical stance on action research, one that echoes the work of Habermas, is taken by Carr and Kemmis (1986: 162), who regard it as a form of 'self-reflective inquiry' by participants, undertaken in order to improve understanding of their practices in context with a view to maximizing social justice. Grundy (1987: 142) regards action research as concerned with improving the 'social conditions of existence'. Kemmis and McTaggart (1992) suggest that:

Action research is concerned equally with changing individuals, on the one hand, and, on the other, the culture of the groups, institutions and societies to which they belong. The culture of a group can be defined in terms of the characteristic substance and forms of the language and discourses, activities and practices, and social relationships and organization which constitute the interactions of the group.

(Kemmis and McTaggart, 1992: 16)

It can be seen that action research is designed to bridge the gap between research and practice (Somelh, 1995: 340), thereby striving to overcome the perceived persistent failure of research to impact on, or improve, practice (see also Rapoport, 1970: 499; and McCormick and James, 1988: 339). Stenhouse (1979) suggests that action research should contribute not only to practice but to a theory of education and teaching which is accessible to other teachers, making educational practice more reflective (Elliott, 1991: 54).

Action research combines diagnosis with reflection, focusing on practical issues that have been identified by participants and which are somehow both problematic yet capable of being changed (Elliott, 1978: 355–6; 1991: 49). Zubera-Skerritt (1996b: 83) suggests that 'the aims of any action research project or program are to bring about practical improvement, innovation, change or development of social practice, and the practitioners' better understanding of their practices'.

The several strands of action research are drawn together by Kemmis and McTaggart (1988) in their all-encompassing definition:

Action research is a form of collective self-reflective inquiry undertaken by participants in social situations in order to improve the rationality and justice of their own social or educational practices, as well as their understanding of these practices and the situations in which these practices are carried out . . .

The approach is only action research when it is collaborative, though it is important to realize that the action research of the group is achieved through the critically examined action of individual group members.

(Kemmis and McTaggart, 1988: 5)

Kemmis and McTaggart (1992) distinguish action research from the everyday actions of teachers:

- It is not the usual thinking teachers do when they think about their teaching. Action research is more systematic and collaborative in collecting evidence on which to base rigorous group reflection.
- It is not simply problem-solving. Action research involves problem-posing, not just problem-solving. It does not start from a view of 'problems' as pathologies. It is motivated by a quest to improve and understand the world by changing it and learning how to improve it from the effects of the changes made.
- It is not research done on other people. Action research is research by particular people on their own work, to help them improve what they do, including how they work with and for others . . .
- Action research is not 'the scientific method'
applied to teaching. There is not just one view of ‘the scientific method’; there are many.
(Kemmis and McTaggart, 1992: 21–2)

Noffke and Zeichner (1987) make several claims for action research with teachers, viz. that it:

• brings about changes in their definitions of their professional skills and roles;
• increases their feelings of self-worth and confidence;
• increases their awareness of classroom issues;
• improves their dispositions toward reflection;
• changes their values and beliefs;
• improves the congruence between practical theories and practices;
• broadens their views on teaching, schooling and society.

A significant feature here is that action research lays claim to the professional development of teachers; action research for professional development is a frequently heard maxim (e.g. Nixon, 1981; Oja and Smulyan, 1989; Somekh, 1995: 343; Winter, 1996). It is ‘situated learning’; learning in the workplace and about the workplace (Collins and Duguid, 1989). The claims for action research, then, are several. Arising from these claims and definitions are several principles.

**Principles and characteristics of action research**

Hult and Lennung (1980: 241–50) and McKernan (1991: 32–3) suggest that action research:

• makes for practical problem solving as well as expanding scientific knowledge;
• enhances the competencies of participants;
• is collaborative;
• is undertaken directly in situ;
• uses feedback from data in an ongoing cyclical process;
• seeks to understand particular complex social situations;
• seeks to understand the processes of change within social systems;
• is undertaken within an agreed framework of ethics;
• seeks to improve the quality of human actions;
• focuses on those problems that are of immediate concern to practitioners;
• is participatory;
• frequently uses case study;
• tends to avoid the paradigm of research that isolates and controls variables;
• is formative, such that the definition of the problem, the aims and methodology may alter during the process of action research;
• includes evaluation and reflection;
• is methodologically eclectic;
• contributes to a science of education;
• strives to render the research usable and sharable by participants;
• is dialogical and celebrates discourse;
• has a critical purpose in some forms;
• strives to be emancipatory.

Zuber-Skerritt (1996b: 85) suggests that action research is:

critical (and self-critical) collaborative inquiry by reflective practitioners being accountable and making results of their inquiry public self-evaluating their practice and engaged in participatory problem-solving and continuing professional development.

This latter view is echoed in Winter’s (1996: 13–14) six key principles of action research:

• reflexive critique, which is the process of becoming aware of our own perceptual biases;
• dialectical critique, which is a way of understanding the relationships between the elements that make up various phenomena in our context;
• collaboration, which is intended to mean that everyone’s view is taken as a contribution to understanding the situation;
• risking disturbance, which is an understanding of our own taken-for-granted processes and willingness to submit them to critique;
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creating plural structures, which involves developing various accounts and critiques, rather than a single authoritative interpretation;
- theory and practice internalized, which is seeing theory and practice as two interdependent yet complementary phases of the change process.

The several features that the definitions at the start of this chapter have in common suggest that action research has key principles. These are summarized by Kemmis and McTaggart (1992: 22–5):

- Action research is an approach to improving education by changing it and learning from the consequences of changes.
- Action research is participatory: it is research through which people work towards the improvement of their own practices (and only secondarily on other people’s practices).
- Action research develops through the self-reflective spiral: a spiral of cycles of planning, acting (implementing plans), observing (systematically), reflecting ... and then re-planning, further implementation, observing and reflecting.
- Action research is collaborative: it involves those responsible for action in improving it.
- Action research establishes self-critical communities of people participating and collaborating in all phases of the research process: the planning, the action, the observation and the reflection; it aims to build communities of people committed to enlightening themselves about the relationship between circumstance, action and consequence in their own situation, and emancipating themselves from the institutional and personal constraints which limit their power to live their own legitimate educational and social values.
- Action research is a systematic learning process in which people act deliberately, though remaining open to surprises and responsive to opportunities.
- Action research involves people in theorizing about their practices – being inquisitive about circumstances, action and consequences and coming to understand the relationships between circumstances, actions and consequences in their own lives.
- Action research requires that people put their practices, ideas and assumptions about institutions to the test by gathering compelling evidence which could convince them that their previous practices, ideas and assumptions were wrong or wrong-headed.
- Action research is open-minded about what counts as evidence (or data) – it involves not only keeping records which describe what is happening as accurately as possible ... but also collecting and analyzing our own judgments, reactions and impressions about what is going on.
- Action research involves keeping a personal journal in which we record our progress and our reflections about two parallel sets of learning: our learnings about the practices we are studying ... and our learnings about the process (the practice) of studying them.
- Action research is a political process because it involves us in making changes that will affect others.
- Action research involves people in making critical analyses of the situations (classrooms, schools, systems) in which they work: these situations are structured institutionally.
- Action research starts small, by working through changes which even a single person (myself) can try, and works towards extensive changes – even critiques of ideas or institutions which in turn might lead to more general reforms of classroom, school or system-wide policies and practices.
- Action research starts with small cycles of planning, acting, observing and reflecting which can help to define issues, ideas and assumptions more clearly so that those involved can define more power questions for themselves as their work progresses.
- Action research starts with small groups of collaborators at the start, but widens the community of participating action researchers so that it gradually includes more
and more of those involved and affected by the practices in question.

- Action research allows us to build records of our improvements: (a) records of our changing activities and practices, (b) records of the changes in the language and discourse in which we describe, explain and justify our practices, (c) records of the changes in the social relationships and forms of organization which characterize and constrain our practices, and (d) records of the development in mastery of action research.

- Action research allows us to give a reasoned justification of our educational work to others because we can show how the evidence we have gathered and the critical reflection we have done have helped us to create a developed, tested and critically-examined rationale for what we are doing.

Though these principles find widespread support in the literature on action research, they require some comment. For example, there is a strong emphasis in these principles on action research as a co-operative, collaborative activity (e.g. Hill and Kerber, 1967). Kemmis and McTaggart locate this in the work of Lewin himself, commenting on his commitment to group decision-making (p. 6). They argue, for example, that 'those affected by planned changes have the primary responsibility for deciding on courses of critically informed action which seem likely to lead to improvement, and for evaluating the results of strategies tried out in practice'. Action research is a group activity (p. 6) and that action research is not individualistic. To lapse into individualism is to destroy the critical dynamic of the group (p. 15) (italics in original).

The view of action research solely as a group activity, however, might be too restricting. It is possible for action research to be an individualistic matter as well, relating action research to the 'teacher-as-researcher' movement (Stenhouse 1975). Whitehead (1985: 98) explicitly writes about action research in individualistic terms, and we can take this to suggest that a teacher can ask herself or himself: 'What do I see as my problem?' 'What do I see as a possible solution?' 'How can I direct the solution?' 'How can I evaluate the outcomes and take subsequent action?'

The adherence to action research as a group activity derives from several sources. Pragmatically, Oja and Smulyan (1989: 14), in arguing for collaborative action research, suggest that teachers are more likely to change their behaviours and attitudes if they have been involved in the research that demonstrates not only the need for such change but that it can be done — the issue of 'ownership' and 'involvement' that finds its parallel in management literature that suggests that those closest to the problem are in the best position to identify it and work towards its solution (e.g. Morrison, 1998).

Ideologically, there is a view that those experiencing the issue should be involved in decision-making, itself hardly surprising given Lewin's own work with disadvantaged and marginalized groups, i.e. groups with little voice. That there is a coupling of the ideological and political debate here has been brought more up to date with the work of Freire (1970) and Torres (1992: 56) in Latin America, the latter setting out several principles of participatory action research:

- It commences with explicit social and political intentions that articulate with the dominated and poor classes and groups in society.
- It must involve popular participation in the research process, i.e. it must have a social basis.
- It regards knowledge as an agent of social transformation as a whole, thereby constituting a powerful critique of those views of knowledge (theory) as somehow separate from practice.
- Its epistemological base is rooted in critical theory and its critique of the subject/object relations in research.
- It must raise the consciousness of individual, groups, and nations.

Participatory action research recognizes a role for the researcher as facilitator, guide, formulator and summarizer of knowledge, and raiser of issues (e.g. the possible consequences of
actions, the awareness of structural conditions) (Weiskopf and Laske (1996: 132–3).

What is being argued here is that action research is a democratic activity (Grundy, 1987: 142). This form of democracy is participatory (rather than, for example, representative), a key feature of critical theory (discussed below, see also Aronowitz and Giroux, 1986; Giroux, 1989). Action research is seen as an empowering activity. Elliott (1991: 54) argues that such empowerment has to be at a collective rather than individual level as individuals do not operate in isolation from each other, but are shaped by organizational and structural forces.

The issue is important, for it begins to separate action research into different camps (Kemmis, 1997: 177). On the one hand are long-time advocates of action research such as Elliott (e.g. 1978; 1991) who are in the tradition of Schwab and Schön and who emphasize reflective practice; this is a particularly powerful field of curriculum research with notions of the ‘teacher-as-researcher’ (Stenhouse, 1975, and the reflective practitioner, Schön, 1983, 1987). On the other are advocates in the ‘critical’ action research model, e.g. Carr and Kemmis (1986).

Action research as critical praxis

Much of the writing in this field of action research draws on the Frankfurt School of critical theory (discussed in Chapter 1), in particular the work of Habermas. Indeed Weiskopf and Laske (1996: 123) locate action research, in the German tradition, squarely as a ‘critical social science’. Using Habermas’s early writing on knowledge-constitutive interests (1972, 1974) a three-fold typification of action research can be constructed; the classification was set out in Chapter 1.

Grundy (1987: 154) argues that ‘technical’ action research is designed to render an existing situation more efficient and effective. In this respect it is akin to Argyris’s notion of ‘single-loop learning’ (Argyris, 1990), being functional, often short-term and technical. It is akin to Schön’s (1987) notion of ‘reflection-in-action’ (Morrison, 1995a). Elliott (1991: 55) suggests that this view is limiting for action research since it is too individualistic and neglects wider curriculum structures, regarding teachers in isolation from wider factors.

By contrast, ‘practical’ action research is designed to promote teachers’ professionalism by drawing on their informed judgement (Grundy, 1987: 154). It is akin to Schön’s ‘reflection-on-action’ and is a hermeneutic activity of understanding and interpreting social situations with a view to their improvement. Grundy suggests (p. 148) that it is this style that characterizes much action research in the UK.

Emancipatory action research has an explicit agenda which is as political as it is educational. Grundy (1987) provides a useful introduction to this view. She argues (pp. 146–7) that emancipatory action research seeks to develop in participants their understandings of illegitimate structural and interpersonal constraints that are preventing the exercise of their autonomy and freedom. These constraints, she argues, are based on illegitimate repression, domination and control. When participants develop a consciousness of these constraints, she suggests, they begin to move from un freedom and constraint to freedom, autonomy and social justice.

Action research, then, aims to empower individuals and social groups to take control over their lives within a framework of the promotion, rather than the suppression of generalizable interests (Habermas, 1976). It commences with a challenge to the illegitimate operation of power, hence in some respects (albeit more politicized because it embraces the dimension of power) it is akin to Argyris’s (1990) notion of ‘double-loop learning’ in that it requires participants to question and challenge given value systems. For Grundy, praxis fuses theory and practice within an egalitarian social order, and action research is designed with the political agenda of improvement towards a more just, egalitarian society. This accords to some extent with Lewin’s view that action research leads to equality and cooperation, an end to exploitation and the furtherance of democracy (see also Hopkins, 1985:...
32; Carr and Kemmis, 1986: 163). Zuber-Skerritt (1996a) suggests that:

emancipatory action research ... is collaborative, critical and self-critical inquiry by practitioners ... into a major problem or issue or concern in their own practice. They own the problem and feel responsible and accountable for solving it through teamwork and through following a cyclical process of:

1 strategic planning;
2 action, i.e. implementing the plan;
3 observation, evaluation and self-evaluation;
4 critical and self-critical reflection on the results of points 1–3 and making decisions for the next cycle of action research.

Zuber-Skerritt (1996a: 3)

Action research, she argues (p. 5) is emancipatory when it aims not only at technical and practical improvement and the participants’ better understanding, along with transformation and change within the existing boundaries and conditions, but also at changing the system itself or those conditions which impede desired improvement in the system/organization ... There is no hierarchy, but open and 'symmetrical communication'.

The emancipatory interest is based on the notion of action researchers as participants in a community of equals. This, in turn is premised on Habermas’s notion of the ‘ideal speech situation’ which can be summarized thus (Morrison, 1996b: 171):

- orientation to a common interest ascertained without deception;
- freedom to enter a discourse and equal opportunity for discussion;
- freedom to check questionable claims and evaluate explanations;
- freedom to modify a given conceptual framework;
- freedom to reflect on the nature of knowledge;
- freedom to allow commands or prohibitions to enter discourse when they can no longer be taken for granted;
- freedom to assess justifications;
- freedom to alter norms;
- freedom to reflect on the nature of political will;
- mutual understanding between participants;
- recognition of the legitimacy of each subject to participate in the dialogue as an autonomous and equal partner;
- discussion to be free from domination and distorting or deforming influences;
- the consensus resulting from discussion derives from the force of the better argument alone, and not from the positional power of the participants;
- all motives except the co-operative search for truth are excluded;
- the speech act validity claims of truth, legitimacy, sincerity and comprehensibility are all addressed.

This formidable list, characterized, perhaps, by the opacity of Habermas’s language itself (see Morrison, 1995b) is problematical, though this will not be discussed in this volume (for a full analysis of this see Morrison (1995b)). What is important to note, perhaps, is that:

- action research here is construed as reflective practice with a political agenda;
- all participants (and action research is participatory) are equal 'players';
- action research, in this vein, is necessarily dialogical – interpersonal – rather than monological (individual); and
- communication is an intrinsic element, with communication being amongst the community of equals (Grundy and Kemmis, 1988: 87, term this 'symmetrical communication');
- because it is a community of equals, action research is necessarily democratic and promotes democracy;
- that the search is for consensus (and consensus requires more than one participant), hence it requires collaboration and participation.

In this sense emancipatory action research fulfils the requirements of action research set out by Kemmis and McTaggart above; indeed it could
be argued that only emancipatory action research (in the three-fold typology) has the potential to do this.

Kemmis (1997: 177) suggests that the distinction between the two camps (the reflective practitioners and the critical theorists) lies in their interpretation of action research. For the former, action research is an improvement to professional practice at the local, perhaps classroom level, within the capacities of individuals and the situations in which they are working; for the latter, action research is part of a broader agenda of changing education, changing schooling and changing society.

A key term in action research is 'empowerment'; for the former camp, empowerment is largely a matter of the professional sphere of operations, achieving professional autonomy through professional development. For the latter, empowerment concerns taking control over one's life within a just, egalitarian, democratic society. Whether the latter is realizable or utopian is a matter of critique of this view. Where is the evidence that critical action research either empowers groups or alters the macro-structures of society? Is critical action research socially transformative? At best the jury is out; at worst the jury simply has gone away as capitalism overrides egalitarianism worldwide. The point at issue here is the extent to which the notion of emancipatory action research has attempted to hijack the action research agenda, and whether, in so doing (if it has), it has wrested action research away from practitioners and into the hands of theorists and the academic research community only.

More specifically, several criticisms have been levelled at this interpretation of emancipatory action research (Gibson, 1985; Morrison, 1995a, 1995b; Somkh, 1995; Melrose, 1996; Grundy, 1996; Weiskopf and Laske, 1996; Webb, 1996; McTaggart, 1996; Kemmis, 1997), including the views that:

- it is utopian and unrealizable;
- it is too controlling and prescriptive, seeking to capture and contain action research within a particular mould – it moves towards conformity;
- it adopts a narrow and particularistic view of emancipation and action research, and how to undertake the latter;
- it undermines the significance of the individual teacher-as-researcher in favour of self-critical communities. Kemmis and McTaggart (1992: 152) pose the question 'why must action research consist of a group process?';
- the three-fold typification of action research is untenable;
- it assumes that rational consensus is achievable, that rational debate will empower all participants (i.e. it understates the issue of power, wherein the most informed are already the most powerful – Grundy (1996: 111) argues that the better argument derives from the one with the most evidence and reasons, and that these are more available to the powerful, thereby rendering the conditions of equality suspect);
- it overstates the desirability of consensus-oriented research (which neglects the complexity of power);
- power cannot be dispersed or rearranged simply by rationality;
- action research as critical theory reduces its practical impact and confines it to the commodification of knowledge in the academy;
- is uncritical and self-contradicting;
- will promote conformity through slavishly adhering to its orthodoxies;
- is naïve in its understanding of groups and celebrates groups over individuals, particularly the 'in-groups' rather than the 'out-groups';
- privileges its own view of science (rejecting objectivity) and lacks modesty;
- privileges the authority of critical theory;
- is elitist whilst purporting to serve egalitarianism;
- assumes an undifferentiated view of action research;
- is attempting to colonize and redirect action research.
This seemingly devastating critique serves to remind the reader that critical action research, even though it has caught the high ground of recent coverage, is highly problematical. It is just as controlling as those controlling agendas that it seeks to attack (Morrison, 1995b). Indeed Melrose (1996: 52) suggests that, because critical research is, itself, value laden it abandons neutrality; it has an explicit social agenda that, under the guise of examining values, ethics, morals and politics that are operating in a particular situation, is actually aimed at transforming the status quo.

**Procedures for action research**

Nixon offers several principles for considering action research in schools (Box 13.1). There are several ways in which the steps of action research have been analysed. Blum (National Education Association of the United States, 1959) casts action research into two simple stages: a diagnostic stage in which the problems are analysed and the hypotheses developed; and a therapeutic stage in which the hypotheses are tested by a consciously directed intervention or experiment in situ. Lewin (1946, 1948) codified the action research process into four main stages: planning, acting, observing and reflecting.

He suggests that action research commences with a general idea and data are sought about the presenting situation. The successful outcome of this examination is the production of a plan of action to reach an identified objective, together with a decision on the first steps to be taken. Lewin acknowledges that this might involve modifying the original plan or idea. The next stage of implementation is accompanied by ongoing fact-finding to monitor and evaluate the intervention, i.e. to act as a formative evaluation. This feeds forward into a revised plan and set of procedures for implementation, themselves accompanied by monitoring and evaluation. Lewin (1948: 205) suggests that such ‘rational social management’ can be conceived of as a spiral of planning, action and fact-finding about the outcomes of the actions taken.

**Box 13.1**

**Action research in classroom and school**

1. All teachers possess certain skills which can contribute to the research task. The important thing is to clarify and define one's own particular set of skills. Some teachers, for example, are able to collect and interpret statistical data; others to record in retrospective accounts the key moments of a lesson. One teacher may know something about questionnaire design; another have a natural flair for interviewing. It is essential that teachers work from their own particular strengths when developing the research.

2. The situations within which teachers work impose different kinds of constraints. Some schools, for example, are equipped with the most up-to-date audio-visual equipment; others cannot even boast a cassette tape-recorder. Some have spare rooms in which interviews could be carried out, others hardly have enough space to implement the existing time-table. Action research must be designed in such a way as to be easily implemented within the pattern of constraints existing within the school.

3. Any initial definition of the research problem will almost certainly be modified as the research proceeds. Nevertheless, this definition is important because it helps to set limits to the inquiry. If, for example, a teacher sets out to explore through action research the problem of how to start a lesson effectively, the research will tend to focus upon the first few minutes of the lesson. The question of what data to collect is very largely answered by a clear definition of the research problem.

Source: Nixon, 1981

The legacy of Lewin’s work, though contested (e.g. Elliott, 1978, 1991; McTigart, 1996: 248) is powerful in the steps of action research set out by Kemmis and McTigart (1981: 2):

In practice, the process begins with a general idea that some kind of improvement or change is desirable. In deciding just where to begin in making improvements, one decides on a field of action . . . where the battle (not the whole war) should be fought. It is a decision on where it is possible to have an impact. The general idea prompts a ‘reconnaissance’ of the circumstances of the field, and fact-finding about them. Having decided on the
field and made a preliminary reconnaissance, the action researcher decides on a general plan of action. Breaking the general plan down into achievable steps, the action researcher settles on the first action step. Before taking this first step the action researcher becomes more circumspect, and devises a way of monitoring the effects of the first action step. When it is possible to maintain fact-finding by monitoring the action, the first step is taken. As the step is implemented, new data start coming in and the effect of the action can be described and evaluated. The general plan is then revised in the light of the new information about the field of action and the second action step can be planned along with appropriate monitoring procedures. The second step is then implemented, monitored and evaluated; and the spiral of action, monitoring, evaluation and replanning continues.

McKernan (1991: 17) suggests that Lewin's model of action research is a series of spirals, each of which incorporates a cycle of analysis, reconnaissance, reconceptualization of the problem, planning of the intervention, implementation of the plan, evaluation of the effectiveness of the intervention. Ebbutt (1985) adds to this the view that feedback within and between each cycle is important, facilitating reflection (see also McNiff, 1988). This is reinforced in the model of action research by Altricher and Östettnner (1993) where, though they have four steps (p. 343): (a) finding a starting point, (b) clarifying the situation, (c) developing action strategies and putting them into practice, (d) making teachers' knowledge public— they suggest that steps (b) and (c) need not be sequential, thereby avoiding the artificial divide that might exist between data collection, analysis and interpretation.

Zuber-Skerritt (1996b: 84) sets emancipatory (critical) action research into a cyclical process of: (1) strategic planning, (2) implementing the plan (action), (3) observation, evaluation and self-evaluation, (4) critical and self-critical reflection on the results of (1)–(3) and making decisions for the next cycle of research. In an imaginative application of action research to organizational change theory she takes the famous work of Lewin (1952) on forcefield analysis and change theory (unfreezing → moving → refreezing) and the work of Beer et al. (1990) on task alignment, and sets them into an action research sequence that clarifies the steps of action research very usefully (Box 13.2).

In our earlier editions we set out an eight-stage process of action research that attempts to draw together the several strands and steps of the action research undertaking. The first stage will involve the identification, evaluation and formulation of the problem perceived as critical in an everyday teaching situation. 'Problem' should be interpreted loosely here so that it could refer to the need to introduce innovation into some aspect of a school's established programme.

The second stage involves preliminary discussion and negotiations among the interested parties— teachers, researchers, advisers, sponsors, possibly— which may culminate in a draft proposal. This may include a statement of the questions to be answered (e.g. 'Under what conditions can curriculum change be best effected?' 'What are the limiting factors in bringing about effective curriculum change?' 'What strong points of action research can be employed to bring about curriculum change?'). The researchers in their capacity as consultants (or sometimes as programme initiators) may draw upon their expertise to bring the problem more into focus, possibly determining causal factors or recommending alternative lines of approach to established ones. This is often the crucial stage for, unless the objectives, purposes and assumptions are made perfectly clear to all concerned, and unless the role of key concepts is stressed (e.g. feedback), the enterprise can easily miscarry.

The third stage may involve a review of the research literature to find out what can be learned from comparable studies, their objectives, procedures and problems encountered.

The fourth stage may involve a modification or redefinition of the initial statement of the problem at stage one. It may now emerge in the form of a testable hypothesis; or as a set of guiding objectives. Sometimes change agents deliberately
decide against the use of objectives on the grounds that they have a constraining effect on the process itself. It is also at this stage that assumptions underlying the project are made explicit (e.g. in order to effect curriculum changes, the attitudes, values, skills and objectives of the teachers involved must be changed).

The fifth stage may be concerned with the selection of research procedures – sampling, administration, choice of materials, methods of teaching and learning, allocation of resources and tasks, deployment of staff and so on.

The sixth stage will be concerned with the choice of the evaluation procedures to be used and will need to take into consideration that evaluation in this context will be continuous.

The seventh stage embraces the implementation of the project itself (over varying periods of time). It will include the conditions and methods of data collection (e.g. fortnightly meetings, the keeping of records, interim reports, final reports, the submission of self-evaluation and group-evaluation reports, etc.); the monitoring of tasks and the transmission of feedback to the research team; and the classification and analysis of data.

The eighth and final stage will involve the interpretation of the data; inferences to be drawn; and overall evaluation of the project (see Woods, 1989). Discussions on the findings will take place in the light of previously agreed evaluative criteria. Errors, mistakes and problems will be considered. A general summing-up may
follow this, in which the outcomes of the project are reviewed, recommendations made, and arrangements for dissemination of results to interested parties decided.

As we stressed, this is a basic framework; much activity of an incidental and possibly ad hoc nature will take place in and around it. This may comprise discussions among teachers, researchers and pupils; regular meetings among teachers or schools to discuss progress and problems; and to exchange information; possibly regional conferences; and related activities, all enhanced by the range of current hardware - tapes, video recordings and transcripts.

Hopkins (1985), McNiff (1988), Edwards (1990) and McNiff, Lomax and Whitehead (1996) offer much practical advice on the conduct of action research, including 'getting started', operationalization, planning, monitoring and documenting the intervention, collecting data and making sense of them, using case studies, evaluating the action research, ethical issues and reporting. We urge readers to go to these helpful sources. These are essentially both introductory sources and manuals for practice.

Kemmis and McTaggart (1992: 25-7) offer a useful series of observations for beginning action research:

- Get an action research group together and participate yourself - be a model learner about action research.
- Be content to start to work with a small group.
- Get organized.
- Start small.
- Establish a timeline.
- Arrange for supportive work-in-progress discussions in the action research group.
- Be tolerant and supportive - expect people to learn from experience.
- Be persistent about monitoring.
- Plan for a long haul on the bigger issues of changing classroom practices and school structures.
- Work to involve (in the research process) those who are involved (in the action), so that they share responsibility for the whole action research process.
- Remember that how you think about things - the language and understandings that shape your action - may need changing just as much as the specifics of what you do.
- Register progress not only with the participant group but also with the whole staff and other interested people.
- If necessary arrange legitimizing rituals - involving consultants or other outsiders.
- Make time to write throughout your project.
- Be explicit about what you have achieved by reporting progress.
- Throughout, keep in mind the distinction between education and schooling.
- Throughout, ask yourself whether your action research project is helping you (and those with whom you work) to improve the extent to which you are living your educational values (italics in original).

It is clear from this list that action research is a blend of practical and theoretical concerns, it is both action and research.

In conducting action research the participants can be both methodologically eclectic and can use a variety of instruments for data collection: questionnaires, diaries, interviews, case studies, observational data, experimental design, field notes, photography, audio and video recording, sociometry, rating scales, biographies and accounts, documents and records, in short the full gamut of techniques (for a discussion of these, see Hopkins, 1985; McKernan, 1991, and the chapters in our own book here).

Additionally a useful way of managing to gain a focus within a group of action researchers is through the use of Nominal Group Technique (Morrison, 1993). The administration is straightforward and is useful for gathering information in a single instance. In this approach one member of the group provides the group with a series of questions, statements or issues. A four-stage model can be adopted:

Stage 1 A short time is provided for individuals to write down without interruption or discussion
with anybody else their own answers, views, reflections and opinions in response to questions/statements/issues provided by the group leader (e.g. problems of teaching or organizing such-and-such, or an identification of issues in the organization of a piece of the curriculum etc.).

**Stage 2** The responses are entered onto a sheet of paper which is then displayed for others to view. The leader invites *individual* comments on the displayed responses to the questions/statements/issue, but no group discussion, i.e. the data collection is still at an individual level, and then notes these comments on the display sheet on which the responses have been collected. The process of inviting individual comments/contributions which are then displayed for everyone to see is repeated until no more comments are received.

**Stage 3** At this point the leader asks the respondents to identify *clusters* of displayed comments and responses, i.e. to put some structure, order and priority into the displayed items. It is here that control of proceedings moves from the leader to the participants. A group discussion takes place since a process of clarification of meanings and organizing issues and responses into coherent and cohesive bundles is required which then moves to the identification of priorities.

**Stage 4** Finally the leader invites any further group discussion about the material and its organization.

The process of the Nominal Group Technique enables individual responses to be included within a group response, i.e. the individual’s contribution to the group delineation of significant issues is maintained. This technique is very useful in gathering data from individuals and putting them into some order which is shared by the group (and action research is largely, though not exclusively, a group matter), e.g. of priority, of similarity and difference, of generality and specificity. It also enables individual disagreements to be registered and to be built into the group responses and identification of significant issues to emerge. Further, it gives equal status to all respondents in the situation, for example, the voice of the new entrant to the teaching profession is given equal consideration to the voice of the headteacher of several years’ experience. The attraction of this process is that it balances writing with discussion, a divergent phase with a convergent phase, space for individual comments and contributions to group interaction. It is a useful device for developing collegiality. All participants have a voice and are heard.

The written partner to the Nominal Group Technique is the Delphi technique. This has the advantage that it does not require participants to meet together as a whole group. This is particularly useful in institutions where time is precious and where it is difficult to arrange a whole group meeting. The process of data collection resembles that of the nominal group technique in many respects: it can be set out in a three-stage process:

**Stage 1** The leader asks participants to respond to a series of questions and statements in writing. This may be done on an individual basis or on a small group basis – which enables it to be used flexibly, e.g. within a department, within an age phase.

**Stage 2** The leader collects the written responses and collates them into clusters of issues and responses (maybe providing some numerical data on frequency of response). This analysis is then passed back to the respondents for comment, further discussion and identification of issues, responses and priorities. At this stage the respondents are presented with a *group response* (which may reflect similarities or record differences) and the respondents are asked to react to this *group response*. By adopting this procedure the individual has the opportunity to agree with the group response (i.e. to move from a possibly small private individual disagreement to a general group agreement) or to indicate a more substantial disagreement with the group response.

**Stage 3** This process is repeated as many times as it is necessary. In saying this, however, the leader will need to identify the most appropriate
place to stop the re-circulation of responses. This might be done at a group meeting which, it is envisaged, will be the plenary session for the participants, i.e. an endpoint of data collection will be in a whole group forum.

By presenting the group response back to the participants, there is a clear progression in the technique towards a polarizing of responses, i.e. a clear identification of areas of consensus and dissensus (and emancipatory action research strives for consensus). The Delphi technique brings advantages of clarity, privacy, voice and collegiality. In doing so it engages the issues of confidentiality, anonymity and disclosure of relevant information whilst protecting participants' rights to privacy. It is a very useful means of undertaking behind-the-scenes data collection which can then be brought to a whole group meeting; the price that this exacts is that the leader has much more work to do in collecting, synthesizing, collating, summarizing, prioritizing and re-circulating data than in the Nominal Group Technique, which is immediate. As participatory techniques both the Nominal Group Technique and Delphi techniques are valuable for data collection and analysis in action research. A fully worked example of the use of Delphi techniques for an international study is Cogan and Derricott (1998), a study of citizenship education.

**Reflexivity in action research**

The analysis so far has made much of the issue of reflection, be it reflection-in-action, reflection-on-action, or critical reflection (Morrison, 1995a). Reflection, it has been argued, occurs at every stage of action research. Beyond this, the notion of reflexivity is central to action research, because the researchers are also the participants and practitioners in the action research – they are part of the social world that they are studying (Hammersley and Atkinson, 1983: 14). Hall (1996: 29) suggests that reflexivity is an integral element and epistemological basis of emancipatory action research because it takes as its pre-

miss the view of the construction of knowledge in which: (a) data are authentic and reflect the experiences of all participants; (b) democratic relations exist between all participants in the research; the researcher's views (which may be theory-laden) do not hold precedence over the views of participants.

What is being required in the notion of reflexivity is a self-conscious awareness of the effects that the participants-as-practitioners-and-researchers are having on the research process, how their values, attitudes, perceptions, opinions, actions, feelings etc. are feeding into the situation being studied (akin, perhaps, to the notion of counter-transferference in counselling). The participants-as-practitioners-and-researchers need to apply to themselves the same critical scrutiny that they are applying to others and to the research. This issue is discussed in Chapter 5.

**Some practical and theoretical matters**

Much has been made in this chapter of the democratic principles that underpin a considerable amount of action research. The ramifications of this are several. For example, there must be a free flow of information between participants and communication must be extensive (Elliott, 1978: 356) and, echoing the notion of the ideal speech situation discussed earlier, communication must be open, unconstrained and unconstraining – the force of the better argument. That this might be problematic in some organizations has been noted by Holly (1984: 100), as action research and schools are often structured differently, schools being hierarchical, formal and bureaucratic whilst action research is collegial, informal, open, collaborative and crosses formal boundaries. In turn this suggests that, for action research to be successful, the conditions of collegiality have to be present, for example (Morrison, 1998: 157–8):

- participatory approaches to decision-making;
- democratic and consensual decision-making;
- shared values, beliefs and goals;
equal rights of participation in discussion;
- equal rights to determine policy;
- equal voting rights on decisions;
- the deployment of sub-groups who are accountable to the whole group;
- shared responsibility and open accountability;
- an extended view of expertise;
- judgements and decisions based on the power of the argument rather than the positions power of the advocates;
- shared ownership of decisions and practices.

It is interesting, perhaps, that these features, derived from management theory, can apply so well to action research – action research nests comfortably within certain management styles. Indeed Zuber-Skerritt (1996b: 90) suggests that the main barriers to emancipatory action research are: (a) single-loop learning (rather than double-loop learning (Argyris, 1990)); (b) overdependence on experts or seniors to the extent that independent thought and expression are stifled; (c) an orientation to efficiency rather than to research and development (one might add here ‘rather than to reflection and problem posing’); (d) a preoccupation with operational rather than strategic thinking and practice.

Zuber-Skerritt (1996a: 17) suggests four practical problems that action researchers might face:

- How can we formulate a method of work which is sufficiently economical as regards the amount of data gathering and data processing for a practitioner to undertake it alongside a normal workload, over a limited time scale?
- How can action research techniques be sufficiently specific that they enable a small-scale investigation by a practitioner to lead to genuinely new insights, and avoid being accused of being either too minimal to be valid, or too elaborate to be feasible?
- How can these methods, given the above, be readily available and accessible to anyone who wishes to practise them, building on the competencies which practitioners already possess?
- How can these methods contribute a genuine improvement of understanding and skill, beyond prior competence, in return for the time and energy expended – that is, a more rigorous process than that which characterizes positivist research?

She also suggests that the issue of the audience of action research reports is problematic:

The answer to the question ‘who are action research reports written for?’ is that there are three audiences – each of equal importance. One audience comprises those colleagues with whom we have collaborated in carrying out the research reported ... It is important to give equal importance to the second audience. These are interested colleagues in other institutions, or in other areas of the same institution, for whom the underlying structure of the work presented may be similar to situations in which they work ... But the third, and perhaps most important audience, is ourselves. The process of writing involves clarifying and exploring ideas and interpretations (p. 26).

Action research reports, argues Somerkh (1995: 347), unlike many ‘academic’ papers, are typically written in the first person, indeed, she argues, not to do so is hard to defend (given, perhaps, the significance of participation, collaboration, reflexivity and individuality). They have to be written in the everyday, commonsense language of the participants.

(Elliott, 1978: 356)

We have already seen that the participants in a change situation may be either a teacher, a group of teachers working internally, or else teachers and researchers working on a collaborative basis. It is this last category, where action research brings together two professional bodies each with its own objectives and values, that we shall consider further at this point because of its inherent problematic nature. Both parties share the same interest in an educational problem, yet their respective orientations to it differ. It has been observed (Halsey, 1972, for instance) that research values precision, control, reproduction and attempts to generalize from specific events. Teaching, on the other hand, is concerned with action, with doing things, and
translates generalizations into specific acts. The incompatibility between action and research in these respects, therefore, can be a source of problems (Marriss and Rein, 1967).

Another issue of some consequence concerns headteachers' and teachers' attitudes to the possibility of change as a result of action research. Hutchinson and Whitehouse (1986), for example, having monitored teachers' efforts to form collaborative groups within their schools, discovered one source of difficulty to be not only resistance from heads but also, and in their view more importantly, from some teachers themselves to the action researcher's efforts to have them scrutinize individual and social practice, possibly with a view to changing it, e.g. in line with the head teacher's policies.

Finally, Winter draws attention to the problem of interpreting data in action research. He writes:

The action research/case study tradition does have a methodology for the creation of data, but not (as yet) for the interpretation of data. We are shown how the descriptive journal, the observer's field notes, and the open-ended interview are utilized to create accounts of events which will confront the practitioner's current practical assumptions and definitions; we are shown the potential value of this process (in terms of increasing teachers' sensitivity) and the problem it poses for individual and collective professional equilibrium. What we are not shown is how the teacher can or should handle the data thus collected.

(Winter, 1982)

The problem for Winter is how to carry out an interpretive analysis of restricted data, that is, data which can make no claim to be generally representative. In other words, the problem of validity cannot be side-stepped by arguing that the contexts are unique.

**Conclusion**

Action research is an expanding field which is commanding significant education attention and which has its own centres (e.g. at the Universities of Cambridge and East Anglia in the UK and Deakin University in Australia) and its own journals (e.g. *Educational Action Research*). It has been seen as a significant vehicle for empowering teachers, though this chapter has questioned the extent of this. As a research device it combines six notions:

1. a straightforward cycle of: identifying a problem, planning an intervention, implementing the intervention, evaluating the outcome;
2. reflective practice;
3. political emancipation;
4. critical theory;
5. professional development; and
6. participatory practitioner research.

It is a flexible, situationally responsive methodology that offers rigour, authenticity and voice. That said, this chapter has tried to expose both the attractions and problematic areas of action research. In its thrust towards integrating action and research one has to question whether this is an optimistic way of ensuring that research impacts on practice for improvement, or whether it is a recessive hybrid.