Action research: a methodological introduction

David Tripp
Murdoch University

Abstract

As a result of its greatly increased in popularity and range of application, action research has now become a loosely applied term for any kind of attempt to improve or investigate practice. In view of the confusion that frequently arises from this, the main aim of this author is to clarify the term. After a brief history of the method, the makes a case for regarding action research as one of a number of different forms of action inquiry which he briefly defines as any ongoing, systematic, empirically based attempt to improve practice. The author them discusses the role of theory in action research before describing what he sees as the distinguishing characteristics of the process. Next, a more detailed examination of the action research cycle is prefaced by an account of the way in which action research stands between routine practice and academic research. The author then moves on to discuss some common issues with the method, such participation, the role of reflection, the need for knowledge management, and the ethics of the process. The last part of the paper covers five different 'modes' of action research, and it concludes with an outline of the structure of an action research dissertation.

Keywords

Research-action - Participation - Inquiry-action - Methodology of research.

Contact:
David Tripp
e-mail: d.tripp@murdoch.edu.au

Brief history

It is not certain who invented action research. The creation of the process is often attributed to Lewin (1946), and whilst he appears to have been the first to publish his work using the term, he may have earlier encountered it in Germany from work performed in Vienna in 1913 (Altrichterand Gestettner,1992). Alternatively, Deshler and Ewart (1995) suggest that action research was first used by John Collier to improve race relations at the community level when he was the Commissioner of Indian Affairs prior to and during the Second World War, and Cooke (undated) appears to provide strong support for this. Then Selener (1997:9) points out that Buckingham's (1926) book *Research for Teachers* advocates a recognisable action research process, so it is unlikely we will ever know when or where the method originated, simply because people have always investigated their practice in order to better improve it. Rogers' (2002) account of John Dewey's (1933) notion of reflection, for instance, shows that it is very similar, and one could also point to the ancient Greek empiricists as using an action research cycle.

Action research is difficult to define for two linked reasons: first, it is such a natural process that it comes in many different guises, and second, it has been developed differently for different applications. Almost immediately upon Lewin's coining of the term in the literature, action research was seen as a general term for four different processes: diagnostic, participant, empirical and experimental (Chein, Cook and Harding, 1948). By the end of the century Deshler and Ewart (1995) could identify six main kinds developed in different fields of application. It was in use in administration (Collier), community development (Lewin, 1946), organisational change (Lippitt, Watson and Westley, 1958) and teaching (Corey, 1949, 1953) in the late 1940s and early 1950s; it appeared in political change, conscientization and empowerment in the 1970's (Freire, 1972, 1982), in national development in agriculture soon thereafter (Fals-Borda, 1985,

1991), and most recently in banking, health and technology generation via the World Bank and others such as Hart and Bond (1997).

Educational action research is principally a strategy for the development of teachers as researchers so that they can use their research to improve their teaching and thus their students' learning, but even within educational action research distinct varieties have emerged. Stephen Corey advocated a strongly technical form in the USA, and two other main trends are a British form more orientated to the development of teacher professional judgement (Elliott and Adleman, 1976; Elliott, 1991), and a socially critical, emancipationally orientated variety in Australia (Carr and Kemmis, 1986). Other related varieties have since been added, perhaps most recently Sachs' (2003) notion of the "activist professional". It was this kind of diversity led to educational action research being described as "a family of activities" (Kemmis, 1981), for as Heikkinen, Kakkori and Huttunen (2001:22) concluded, 'a multi-paradigmatic situation seems to exist amongst action researchers'.

The action inquiry cycle

It's important to recognise action research as one of a number of different kinds of action inquiry. Action Inquiry is a generic term for any process that follows a cycle in which one improves practice by systematically oscillating between taking action in the field of practice, and inquiring into it. One plans, implements, describes, and evaluates an improving change to one's practice, learning more about both the practice and action inquiry in the process.

Diagram 1: The 4-phase representation of the basic action inquiry cycle
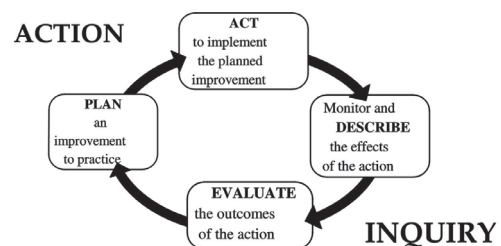
Most improvement processes follow the same cycle. Problem solving, for instance, begins with identifying the problem, planning a solution, implementing it, monitoring and evaluating its effectiveness. Similarly, medical treatment also follows the cycle: monitoring of symptoms, diagnosis of disease, prescription of remedy, treatment, monitoring and evaluation of results. Most development processes also follow the same cycle, whether it's personal or professional, or of a product such as a better mouse trap, a curriculum, or a policy. It is clear, however, that different applications and developments of the basic action inquiry cycle will require different actions in each phase and will start in different places.

Some of the different developments of the basic action inquiry process include action research (Lewin, 1946), action learning (Revons,1971), reflective practice (Schon 1983), action design (Argrys, 1985), experiential learning (Kolb 1984), the PDCA cycle (Deming 1986), PLA, PAR, PAD, PALM, PRA[1] , etc (Chambers, 1983), deliberative practice (McCutcheon, 1988), praxis research (Whyte, 1964;1991), appreciative inquiry (Cooperrider; Shrevasteva, 1987), diagnostic practice (Generic in medicine, remedial teaching, etc.), action evaluation (Rothman 1999), soft systems methodology (Checkland 1998), and transformational learning (Marquardt, 1999).

There are several reasons for the production of the many different kinds of action inquiry because some people have recognised and conceptualised the cycle without knowledge of the other versions already in existence, and one can name the same cycle and its steps in many different ways. Also people have developed versions customized to particular uses and situations because there are many different ways of using the cycle, and one can perform each of the four activities of the cycle in many different ways. Thus different kinds of action inquiry tend to use different processes in each step, and have different outcomes that are likely to be reported in different ways to different audiences.

What kind of process one uses, and how one uses it, depend on aims and circumstances, and even with 'the same' aims and circumstances, different people may have different skills, intentions, time-lines, levels of support, ways of collaborating, and so on, all of which will affect the processes and outcomes. The important point is that the kind of action inquiry used is appropriate to the aims, practices, participants, situation (and its enablers and constraints).

The characteristics of action research

It makes some sense to differentiate action research from other kinds of action inquiry, by defining it as using recognised research techniques to produce the description of the effects of the changes to practice in the action inquiry cycle. The main reason for using the term 'action inquiry' as a superordinate process that subsumes action research is that the term 'action research' is becoming so widely and loosely applied that it is becoming meaningless. A definition such as, "Action research is a term which is applied to projects in which practitioners seek to effect transformations in their own practices ..." (Brown and Dowling, 2001, p.152), for instance, is accurate in some aspects, but it uses the term 'research' in the very open fashion of any kind of careful study, and using it in that way deprives academics of using it to distinguish the form of action inquiry that employs the more specific meaning attached to research in academia.

This is important because if any kind of reflection on action is called action research, we risk rejection by the very people on whom most of us rely for approving or funding university work. As it was with qualitative research two decades ago, I am now regularly contacted by higher degree students who are not being allowed to use action research for their

---

1. PLA: Participatory Learning and Action; PAR: Participatory Action research; PAD: Participatory Action Development; PALM: Participatory Learning Methods; PRA: Participatory Rural Appraisal.

dissertations. Their research supervisors, if they consider it to be research at all (rather than, for instance, professional development), do not consider what they see termed action research to be sufficiently methodologically rigorous to produce a higher degree research thesis.

Rather than adhering to a more open definition of action research, such as the "identification of strategies of planned action which are implemented, and then systematically submitted to observation, reflection and change" (Kemmis, 1981), I have come to favour a narrower definition such as, "Action research is a form of action inquiry that employs recognised research techniques to inform the action taken to improve practice", and I would add that the research techniques should meet the criteria common to other kinds of academic research (ie. withstand peer-review of procedures, significance, originality, validity, etc.).

That said, although action research tends to be pragmatic, it is clearly distinguished from practice, and although it is research it is also clearly distinguished from traditional scientific research, mainly because action research both changes what is being researched, and it is constrained by the context and ethics of practice.

The point is that action research requires action in the fields of both practice and research, so to a greater or lesser extent, it will have characteristics of both routine practice and scientific research; the following table shows how action research stands in relation to some of the differences between these two. It should be noted that whilst routine practice and scientific inquiry

are shown as the poles of the continua, they have contradictory tendencies, so they are not 'pure' categories, but mixed oppositions. For example, in Row 1, routine practice is shown as habitual, though what have become habits were once both innovative and original in some respects. Similarly, there is much about scientific research that is routine, particularly in a period of what Kuhn (1970) refers to as 'normal' science.

Some other points illustrated in Table are:

Row 2 Action research should be continual rather than either continuous or occasional, because one cannot continuously action research one's practice, but one should regularly work to improve an aspect of it, so it should be more frequent than occasional.

Row 3 Practice tends to be a matter of responding effectively and immediately to events as they arise, and scientific research tends to operate according to set methodological protocols. Action research comes between the two because it is pro-active with regard to change, and its change is strategic in the sense that it is action based upon understanding achieved through the analysis of research information.

Strategic action (Grundy and Kemmis, 1982) or 'tactical action' (Jacques, 1992) stands in contrast to action which is instant, a result of routine or habit, though it is informed by the wisdom of experience applied to good information which can only be produced by sound research processes.

It also stands in contrast to action that is constrained by research protocols: methodology is always paramount in scientific research, but in action research, research methodology should always be subservient to practice, so that one does not decide not to try to evaluate change, for instance, because one does not have a good measure or adequate baseline data, rather one seeks to make judgements on the best evidence that one can produce.

Row 4 Whereas routine practice tends to be the sole responsibility of the practitioner, and

Table 1: *Eleven characteristics of action research*

Row	Routine practice	Action research	Scientific research	
1	habitual	innovative	original resourced	
2	continuous	continual	occasional	
3	Responsive contingency driven	pro-active strategically driven	methodologically driven	
4	individual	participatory	collaborative	collegial
5	naturalistic	interventionist	experimental	
6	unexamined	problematised	commissioned	
7	experienced	deliberated	argued	
8	unarticulated	documented	peer reviewed	
9	pragmatic	understood	explained	theorised
10	context specific		generalised	
11	private	disseminated	published	

most research is carried out in teams these days, action research is participatory in that it includes all those involved in various ways, and it is collaborative in its ways of working.

Row 5 Routine practice is naturalistic in that it is not researched, so there is no manipulation of the situation; both action research and scientific research are experimental in the sense of making things happen to see what actually happens, but because action research occurs in non-manipulated social settings, it does not follow the cannons of controlled variables common to scientific research, so it can be termed more generally interventionist rather than more narrowly experimental.

Row 6 Routine practice does not normally allow for much examination of its procedures, values and effectiveness, but as an improvement process, action research always starts from some kind of a problem, and the term 'problematise' is often applied because action research, in common with Argrys and Schon's (1974) idea of 'double-loop learning' in reflective practice, treats 'the problem' as a problem itself. In fact, socially critical action research often starts with an examination of who owns the problem, which is one form of problematisation. Scientific research, according to Kuhn, is generally a matter of proceeding with a given agenda, and that, coupled with the need for funding, means that it is generally commissioned either by government or commercial interests, or by peer review. Action research is sometimes commissioned too, of course, but even then is far less constrained by this than scientific research.

Row 7 On-going routine practice is generally simply experienced by the participants, though when significant professional judgement is required, deliberation occurs, and the process moves more towards action inquiry, as the practitioner will usually follow up the results of the judgement in order to learn from it. Action research is always deliberative because when one intervenes in

routine practice one is venturing into the unknown, so one has to make expert judgements about what, for instance, is most likely to improve the situation most effectively. Scientific research is more often argued in the formal sense of in- and deductive theorisation. Those processes are employed in action research, of course, but not for the production of positivistic conclusions and predictions, which are very different from good professional judgements.

Row 8 Again, action research stands somewhere between the non-recording of much that happens in routine practice and the rigorous peer review of method, data and conclusions in scientific research. Action research tends to document its progress, often through compiling a portfolio of the kind of information that is regularly produced by routine practice, such as test scores or in education, client satisfaction indices in service organisations. or the minutes of production team meetings in business.

Row 9 The main criterion for routine practice is that it works well, and concerns with how and why it works only arise when there are problems or improvements could be made, under which conditions the practitioner will move into an action inquiry, if not an action research mode where understanding the problem and knowing why it occurs are essential to designing changes to improve the situation. Theories are conceptual systems constructed to explain other knowledge, and they are a major concern of scientific research. One does need to explain phenomena in action research, it is not its purpose to construct the kind of web of explanations that comprise scientific theory.

Row 10 This needs no explanation: the context, processes and results of routine practice are limited to those of the practitioner concerned, where as scientific research aims for as wide generalisation as possible.

Row 11 This has to do with knowledge management: knowledge gained in routine practice tends to remain with the individual practitioner, and knowledge gained in action research is more often be shared with known others in the same organisation or profession; it tends to be disseminated through networking and teaching rather than through publication as in the case of scientific research. The fact that action research tends towards the practitioner end of these last two continua is something that needs addressing if it is to make much contribution to practitioner knowledge in the wider sphere of, for instance, the strategies of qualified practitioners across a whole occupation.

To return to the point that these characteristics are a tension between action in the fields of practice and research, it is essential not to lose sight of action research as a process in which practitioners "gather evidence about their practices and critique assumptions, beliefs and values embedded in them" (Elliott, 2000:209). Similarly, McNiff (2002:7) writes that action research involves becoming aware of the principles that drive us in our work: we need to be clear about both what we are doing and why we are doing it.

Whilst most would agree that such an orientation is essential to action research, it is also central to other kinds of action inquiry, especially reflective practice, and without the distinction of the role of research methods in the process, the two would appear to be identical. Separating the two, however, is more a matter of emphasis than kind. For instance, an early childhood educator student of mine demonstrated this approach when reflecting on what she wanted to achieve in her action research project: "*For me that means I will not only become play-based in my approach to education, but I will also come to understand why I have become so.*" As the supervisor of her action research, in contrast to reflective practice, for instance, I would see it as my job to ensure

that she came to reorientate her practice and deepen her understanding of herself in as methodologically sound a way (rather then merely pragmatically effective) as possible.

Another characteristic of the reciprocal relationship between research and improved practice is that one does not just understand practice in order to improve it in action research, one also gains an improved understanding of routine practice through improving it, so improvement is the context, means and main end of understanding.

Context: As action research is an improvement process, one cannot action research routine practice: action research creates a moving research target by disrupting routine practice, and it leaves many loose ends in its wake (see for instance, the example of "action theorising" below).

Means: As changes are reactive, monitoring what changes and how, leads not only to understanding one's own practice, but also to further understanding aspects of the situation, people, and one's practices that one has not set out to change. For example, many teachers learn a great deal about their students' perceptions of good teaching when they shift from teacher transmission to collaborative construction of knowledge (Ker 1999).

End: Dissemination and publication of the understanding of practice gained from improving it can also be made into an important spin-off of action research.

For example, a student who had thought that she had started her action research project 'with where the students are' wrote at the end of the first cycle:

> I realise now that I should have got more information about the students before I made my initial project plans. I have discovered that nearly all the learning strategies I planned on using to move both myself and the learners into a more student-centred approach proved too confronting to the students to allow them to engage with the strategies successfully.

That was something she would not have learned about her students had she not tried to improve her teaching and their learning, and that kind of experience is quite common: we only discover the nature of some things when we try to change them. In order to change her teaching approach, this teacher had to shift her intervention from her teaching strategies to dealing with her students' attitudes and experiences. In this way new studies, not just new cycles, are born from existing ones (Tillotson, 2000).

Theory in action research

As a practical improvement process, action research is sometimes considered to be atheoretical, but whilst it is true that traditional disciplinary theory is not a major priority, it is nevertheless important to draw on it for understanding situations, planning effective improvements, and explaining results. Elliott (1994) makes this point (that academic theorists provide resources for reflection and development of practice in action research), but also suggests that practitioners do not simply adopt 'ready-made' theory, but that they problematise it through application. In her excellent synthesis of theory in action research, Somekh (2003:260) interprets this as the practitioner coming to 'personally own' others' theories, but neither Elliott nor Somekh substantiate the extent to which school teachers use ready-made theory in these ways or how they contribute their experience to the further development of theory. In fact, my experience is that it is only when school teachers work in partnership with university academics that they engage with ready-made theory, and I have outlined how we can work that in practice elsewhere (Tripp, 1993:148-151).

Drawing on my own experience again, I have found that what one does in action research is often driven by the kind of inductive theorisation that might be termed 'action theorising', a process best described by example.

Data Record

I ask the class of in-service teachers to swap and silently read each other's papers.

I notice the first two do not do so, but one is reading hers aloud to her partner.

Within a few minutes all but one pair are reading their papers aloud to each other.

Research Question

Why are they not doing as asked?

Hypothesis 1
a) They haven't heard my instructions; or
b) they have not understood the activity.
Verification of Hypothesis 1
I repeat the instructions and observe results, but they ignore my instructions again and continue to read aloud to each other, so I discard Hypothesis 1.

Hypothesis 2
They are too shy to show each other their writing because –
a) it's rough notes/first draft, which would be unintelligible to their partner;
b) they have written private things (too personal? subversive?) to share.
Verification of Hypothesis 2:
I point out their behaviour to them, and ask if it's one or the other problem. They agree it's the former, so I accept hypothesis 2.
Implication for action planning:
I make a note to introduce the activity differently next time.
Further data:
I collect their writing, and observe that no one's is at all unintelligible, so I belatedly discard Hypothesis 2.

Hypothesis 3
The students are unwilling to show each other their written work because they are drawing on their (Asian) school experience in which written work is competitive and

only swapped for marking purposes.
Verification of Hypothesis 3:
Not possible as I don't see this group again.
New question:
Why did these learners misrepresent their motivation to me?
Whilst it is clear that I am engaged in some processes of inductive theorisation, these are but a means to the end of improving practice, not an end in itself, which explains why practitioners do not develop their theorising into disciplinary theory: they are too busy with their practice to pursue 'pure' research questions.

Action Research and Researched Practice

As I pointed out above, it is very difficult to draw definitive lines between action research and other kinds of action inquiry, but another important definitional misunderstanding that occurs in the field is the distinction between action research and researched action. As long ago as 1945, Lippitt wrote of action research to Collier, "It is not research-to-be-followed-by-action, or research-on-action, but research-as-action" Cooke (undated:7). As a reviewer of action research papers submitted for publication in various journals, I not infrequently find people who have done a case study of a developmental or change process, such as the production of an innovative teaching and learning program, terming their work 'action research', though they have taken no action and the development has proceeded without any research.

I use two criteria to distinguish one from the other: Is the change process being driven by the analysis and interpretation of adequate, valid, and reliable data? Is the main aim of the activity the creation of theoretical knowledge, or the improvement of practice? This means that a case study of an action research process is not action research, though it should be accepted for publication in an action research journal as research on action research.

To return to the example of the kind of theorising that occurs in action research to illustrate the difference, were I engaged in researching that situation, I might go on to verify my third hypothesis and map the extent and nature of the phenomenon through performing the same task as an experimental intervention with a purposeful sample of other groups. To do that would be to engage in a process of 'researched action' rather than action research, because I would have prioritised the knowledge gained over improving the practice. But although in seeking to explain the students' behaviour I was using elements of the theory construction process, I was doing so only in order to improve what works in my teaching. And it was as a practitioner that I did not pursue the verification of Hypothesis 3, but made a practical professional judgement that if the workshop participants were more comfortable reading aloud to each other, next time I would give them the time to do so.

In action research we tend to engage in inductive theorising only when there's not an existing explanation or theory that explains to our satisfaction whatever we've observed or are trying to do, so action researchers often operate deductively, especially in the early stages.

It is often the case, however, that there are no ready-made theories that fit our data or intentions, in which case we will work inductively, theorising our data through creating new categories. But when we do that, our purpose is entirely pragmatic: we don't do it because we just want to know (that's "pure research"), we ask why something is as it is only so that we can better know how to improve practice.

It is, however, possible to combine seriously undertaken inductive theorising as the basis for improvement through action research, though it is rare. A good example is Stead, et all (1991) who developed a theory of exclusion in a local mental health service in which they

identified four excluded identities (absent, difficult, mediated and elusive) that then served as the basis for improving the service to those patients.

Note that I would say I was engaged in reflective practice rather than action research in the above example, as it met too few research criteria. However, I did think at the time that if it were true that these teachers were still stuck in their school learning mode of behaviour, it would improve their learning if they could move towards a more adult educational culture. And were I working with the group over a more extended period, I might well have chosen to action research how best to do that, probably beginning with a well planned situational analysis to identify other manifestations of their adherence to school learning behaviours.

The action research process

The action research cycle

The action research cycle includes all the activities of the basic action inquiry cycle, and it is often represented in the same way (Kemmis and McTaggart, 1990), but although it looks clear enough initially, it is not entirely accurate in its separation and sequencing of the action and monitoring phases. In most kinds of action inquiry one often monitors the effects of one's action during the action phase, and in action research one will often produce data on the effects of a change to practice during implementation (through observation, for instance), and both before and after implementation (as when using a pre/post method to monitor the effects of a change).

Nomenclature is also a problem because planning, monitoring and evaluating are all different forms of action, and so implementation is more appropriate for what is often termed the action phase.

It is clearer to represent the action research cycle as a sequence of three phases of action in the two different fields of practice and inquiry into the practice.

This table makes two other aspects clear. First, it shows that though the basic sequence remains the same in both fields, different action will be occurring in them. Second, it also makes explicit that one has to plan for both the change in practice and the evaluation of the effects of the change in practice. This is important in action research because planning how to evaluate the effects of the change in practice is generally much more rigorous than in many other kinds of action inquiry.

Action research begins with a reconnaissance

The reconnaissance is a situational analysis which produces a broad overview of the action research context, current practices, participants, and concerns. Apart from designing and implementing the improving change to practice, the reconnaissance follows exactly the same action research cycle, planning how to monitor and evaluate the current situation, doing so, and then

Table 2: Field representation of the action research cycle

Action sequence	Action taken in the field of	
	Practice	Inquiry
Planning of	a change to practice	the evaluation of results of the change to practice
Implementation of	the change to practice	data production, analysis and reporting
Evaluation of		a) the change to practice and; b) the action inquiry process

interpreting and evaluating the results in order to plan an appropriate change to practice in the first improving action research cycle.

Action research is an iterative cycle

The iterative nature of the action inquiry process is perhaps its single most distinguishing characteristic. Although all improvement and development processes tend to include all the phases of the basic action inquiry cycle, they do not all do so in the same sequence, nor do they repeat the cycle in an on-going manner to make improvements in an incremental fashion. Most problem solving, for instance, organisational development or experimental research, are not action inquiry according to this criterion. Action research, as a form of action inquiry, is an on-going, repetitive process in which what is achieved in each cycle provides the starting point for further improvement in the next.

Action inquiry is used in each phase

I term these action inquiry cycles the epicycles of action research because one proceeds through perhaps many action inquiry cycles when acting in each of the phases of the action research cycle. When planning, for example, one will plan what to plan, start planning it, monitor the progress of the plan, and evaluate it before moving on to implement it.

Reflection is essential to the action research process

One of the reasons for not including reflection as a separate phase in the action inquiry cycle is that it should occur throughout. The process begins with reflection on current practice in order to identify what to improve; reflection is also essential to effective planning, implementation, and monitoring, and the cycle ends with reflecting on what happened. This is lost when the process is reduced to 'plan, do, reflect' as it frequently is in education (see Earthlink, undated, for instance).

Action research tends to be participatory

It is clear that action research has been a participatory method since its inception, there are, however, many views and uses of the term *participation*. On the one hand there is an extensive literature devoted to *participatory action research* as if it can be non-participatory when anyone who is affected by change thereby participates in it, whilst on the other hand, others see it as a collective process with political outcomes (Carr and Kemmis, 1986).

From a purely practical perspective, action research works best with co-operation and collaboration because the effects of a single individual's practice in an organisation are never confined to that individual. Individually practised action research can create a problem that Senge (1992:23) referred to the "core learning dilemma": we learn best from experience, but we cannot do this if we neither directly experience the consequences of many of our most important decisions, nor can tap into the experiences of those who do. This means that it is not a question of whether or not to involve others, but questions of how others are involved, and how they can best participate in the process.

Unfortunately it is not possible at the outset to say how people participate in a project, because this will depend on their interests and capabilities, in regard to different aspects of a project, at different times and places. In view of this, I find it helpful to refer to four different ways in which people can participate in an action research project:

Compulsion: when a participant has no choice in the matter, usually because it is some kind of a constraint or a directive from a superior.
Co-option: when a researcher persuades someone (to choose) to help them with their research, the co-opted person in effect agreeing to provide a service to the researcher.
Co-operation: when a researcher gets someone

to agree to participate in their project, the co-operating person working as a partner in many respects (in that they are regularly consulted), but on a project that always "belongs" to the researcher (project "owner"). Most dissertation research is of this kind. Collaboration: when people work together as co-researchers on a project in which they have equal shares.

I often work with teachers on action research for professional development, for example, and it is surprising how few consider enabling their students to participate in their work, so participation is initially seen as a matter of compulsion: the teacher decides what will happen and their students are not even consulted. Yet students can be involved at least at the co-optional level. For instance, they can assist as informants, they can help to produce data by observing and interviewing other participants, and assist in planning and implementing changes to practice.

Participation has serious ethical ramifications, because how one defines participation can result in some participants being adversely affected by their participation. The World Bank, for instance, takes participation seriously (Tikare, et al, 2001), but it includes a 1-way flow of information from the project to those affected as a form of participation, whereas the recipients of the information may in fact be merely told they will lose their homes and livelihoods through being relocated to make way for an industrial development. Similarly, 'consultation' as the 2-way flow of information is also seen as a form of participation, yet that is often used as a form of espionage, the aim being to discuss a project with those affected in order to discover from them how to overcome their objections to a project's predetermined plan of action

For such ethical reasons it is necessary to check on participation, not just at the proposal stage, but also throughout its duration. As a preventative, one should frequently check on what steps the researcher has taken to ensure

that those affected are not being deceived, manipulated, or exploited. As a positive promotion at the whole project level, one should aim for an action research project that :

1) addresses topics of mutual concern
2) is based on a shared commitment to performing the research
3) enables all those involved to actively participate in any way they desire
4) shares control over the research processes evenly as possible
5) produces a *input cost : outcomes value* ratio that is similarly beneficial for all participants
6) establishes inclusive procedures for deciding matters of justice amongst participants.

Action research benefits from knowledge management

First, in terms of professional and organisational development, action research is most effective when it is networked (vertically and horizontally) throughout the organization, though in my experience this is seldom achieved.

Second, action research produces much practice-based knowledge that ought to be incorporated into the academic content of 'vocational' disciplines such as teaching, business, and journalism, but very little of the knowledge generated by action research is actually theorised and published in refereed academic journals. Action research should be able to bridge both the theory into practice transition, and the practice into theory transformation, though it shows little sign of doing so, perhaps because it is so orientated to improving practice.

Ethics in action research

Ethics has already been raised in regard to participation because there are always issues when one is making changes that affect others. A major problem for university action researchers is that they can seldom meet the medical research standards that are usually applied. My

university, for instance, construed a teacher's students as the 'research subjects', and then insisted that they be given the right of withdrawal which is simply impossible in a school setting. A way was found around such difficulties (Tripp, 2002) because ethical principles must underpin (and thereby legitimise) the procedures and ground rules of all research.

My position is that the general ethical guideline that should be built into any action research project right from the start is that –

No researcher or other participant ever engages in an activity that disadvantages another participant without their knowledge and consent.

This usually rules out control group experiments, for instance, because it is disadvantageous to the control group not to have the benefit of changes that the action researcher expects to improve their practice. It also rules out the action researcher continuing with a change in practice that they can see is not improving the situation. That can be a problem for dissertation students who cannot then complete a pre- and post- research design although they have painstakingly produced base-line (or pre-change) data.

The reason for allowing disadvantage with knowledge and consent is that participants often wish to make personal sacrifices in terms of their time and effort in order to improve their practice. Linked to this qualification, however, is the principle that the value of the outcomes for all participants should be tied to their input. This does not mean that outcomes will be similar in kind for all participants: when university academics work with school teachers, for instance, the valuable outcomes for the teacher tend to be in terms of improved practice, for the academic in terms of consultation fees and publications. One of the major problems with more traditional forms of research in education is that far too often teachers' professional experience and knowledge of their practice has been appropriated by the researcher with no corresponding benefit to the teachers involved (Tripp, 1983). As it is hard to estimate such

values, action researchers often co-publish with participants who have made a major contribution to the project (see, for instance, Burge with Ve (2000) or Tripp with Wilson, 2001).

Five modes of action research

Participation is not the only determinant of the kind of action research project being undertaken: there is a dialect between choice of topic and participation, variations in which give rise to different *modes* of action research, a term coined by Grundy (1983). For instance, a teacher who is simply implementing a new way of teaching addition or spelling that they have read about in a book or learned in a course, is doing something quite different from a teacher who is trying to invent ways of dealing with an issue of social justice in their school. The first is 'technical' in the sense that the teacher is trying to make an 'off the shelf' idea work in their situation. The second is 'socially critical' in the sense that the teacher is trying to find ways of changing the political culture of their institution. These examples illustrate three major differences in the nature of the topics; these can be put as questions:

a) is the project about improving the efficiency and effectiveness of current practices, or introducing new ones?
b) if the project is introducing a practice new to the situation, then is the action researcher implementing, adapting or adopting an idea or practice from elsewhere, or are they using the project to develop entirely new and original ones of their own?
c) is the project concerned with working within the existing institutional culture and the constraints on practice that the culture creates, or is it about changing that culture and those constraints?

Answers to these questions enable us to identify some different *modes* of action

research. For instance, Grundy (1983) suggests that questions (a) and (b) distinguish between technical and practical action research. I find it useful to use the following 5 modes when thinking about the nature of an action research project :

1) Technical action research
Technical action research is an important 'fix it' approach in which the action researcher takes an existing practice from somewhere else and implements it in their own field of practice to effect an improvement. It's 'technical' because the action researcher is acting in a fairly mechanical fashion: in effect they are 'following the book'. A good example of technical action research is the dissemination of a centrally developed project or approach such as the *Reading Recovery* program. There the rationale, aims, materials and procedures are all given to the teachers who find ways to use the project in their teaching, whilst being faithful to the original aims and outcomes as far as possible.

2) Practical action research
Drawing on Grundy (1983) again, practical action research is different from technical in that the action researcher chooses or designs the changes made. The two distinguishing characteristics here are: first, that it is more like practising a craft — the crafter may take an order, but how they achieve the desired result is left very much up to them, their experience and ideas; and second, that the kind of decisions they take about what to do how and when are informed by their professional notions of what will be best for their clients. Crafters set their own criteria for quality, beauty, effectiveness, durability, and so on; so in education the action researcher is looking towards contributing to children's development, which means that they will be making changes to improve their students' learning and self-esteem, to increase their interest, autonomy or co-operation, and so on.

3) Political action research

The third question (c), is about changing constraints, and when one begins to attempt to change the constraints on action, one has to engage in politics because it means working with or against others to change 'the system'. One can only do that through the exercise of power which makes such action political. There are, of course, many kinds of power and many ways in which to exercise it. For instance, there is the power to get people working together, the power to do things when others aren't looking, the power to overcome the objections of others, and so on.

Some of the constraints that I've seen teachers working to change are class size, gendered differentials, the exclusion of parents, and the allocation of teaching staff and time by subject.

It's interesting that although there are always a number of very real constraints (such as the amount of time in a day, the examination syllabus, or the children's home background), what are perceived to be other equally real constraints sometimes turn out to be myths. In fact none of the above ideas turned out to be a real constraint — they were all able to be got around in one way or another.

For example (Tripp, 1992), an in-service student of mine wanted to develop a much more 'real language/whole language' approach to teaching literacy, and to do it she realised that she'd have to have more and different help from more parents than the few who were coming in to listen to children read. When she went to her principal with the idea, he said that she could not do it because, 'the parents would neither understand it, not want to be a part of it, nor want it for their children.' She thought otherwise and her strategy was to work with a few parents initially. Somewhat to her surprise, they were enthusiastic supporters from the start, and when she later used a parents' evening to outline her developing approach, she found the majority were similarly supportive. In this case, the initial perception of

the parents necessarily being a constraint to her action was in fact quite wrong, and with strong parent support the principal then encouraged her to try her approach. The constraints that the principal saw were in fact imaginary, but she had to get others to help her convince her superior that such was the case, and what she did was therefore political.

Socially critical action research

This is really a particular mode of political action research, and the two overlap because when one is working on changing or getting around the constraints on what you can do, it is usually the result of a change in your thinking about the ultimate value and politics of the constraints; you are not looking at how better to do something that you already do, but how to make your part of the world a better place in terms of increased social justice. Generally, this is defined in the literature by such changes as increasing equality of opportunity, better meeting people's needs, tolerance and understanding of, others, more and more effective co-operation, greater valuing of people (oneself and others), and so on. These are the 'big ideas' of a democratic society. It becomes socially critical action research when one believes that the taken-for-granted 'dominant' view and operation of the system with regard to such things is actually unjust in various ways and needs to be changed.

One could take an example from the list of constraints above. The idea that teaching boys and girls together for all subjects is best practice is normal within the system, and it can constrain action. So does the idea that the system should give boys and girls equal chances of success in all subjects and spheres of life. But one could challenge such assumptions and practices on the basis that the gender interactions did not in fact give boys and girls equal chances of success, and in challenging that practice one is critiquing the way in which the system operates unjustly.

Emancipatory action research

This is another variation of political action research which has the express aim of changing the *status quo* not only for oneself and one's immediate colleagues, but of changing it on a larger scale of the whole social group. The suffragettes, for instance, did not just want to get the vote for themselves, but to ensure that all women were enfranchised. So too, emancipatory action research is a political mode which operates on a larger scale, and so it is necessarily a participatory and collaborative effort, and one which is socially critical in nature. Needless to say, emancipatory action research is a rare occurrence.

The differences outlined above are characteristics of different modes of doing action research rather than different kinds of action research project, because action research projects seldom use only one mode, but continually shift from one kind of action to another.

For example, a teacher might begin in a technical mode, implementing a published project that their Principal thinks is a better way in which to teach spelling. In doing so, the teacher comes up against the constraint of time and decides to get more help in the classroom. To do that they have to act politically, and having achieved that they return to the technical business of making the project work in their classroom. When planning their next lesson, they suddenly have a great idea of their own, and in designing, trying and evaluating it, they find they are engaged in a practical mode of action research. And in that cycle they feel it would be good to include the learners in designing and implementing the changes, so it becomes participatory and more democratic, and hence socially critical. So a project is not usually one particular mode, but different cycles will tend to have different modes.

Identifying these different modes may appear to be a peculiarly academic activity, but two reasons why it is useful to be aware of the

different ways and levels of participation and modes of action research are, first, they present a choice of different ways of operating which may not be considered if they have not been identified and explained; second, knowing how one is (or needs to be) operating in these regards, enables one to ensure a good process, particularly in terms of matching intended outcomes with appropriate monitoring techniques.

The action research dissertation

A research proposal that focuses on the action research process itself is notoriously difficult to have approved by a university research committee simply because it is not possible to pre-specify either what knowledge will be gained or what practical outcomes will be achieved because the results of each cycle will determine what happens next, and there is no saying at the outset where the process will lead. One can outline the fieldwork situation, but because the initial situational analysis (or reconnaissance) is part of the fieldwork, then it can seldom be performed prior to the acceptance of the proposal. Furthermore, if one is facilitating an action research project, one cannot even specify the topics that will be worked on, for these will emerge from the situation analysis and be selected by the participants. For these reasons it makes sense to use Heron's (1987) term 'launching statement' instead of 'research proposal', and although producing this is useful at the outset of a project, it does not suit the requirement of most universities for a more traditional research proposal.

A dissertation cannot be achieved through performing action research, but through completing a case study of the action research performed. This means that there are in fact two methodologies to be described and justified in an action research proposal: the action research processes to be used in the field, and the (narrative) case study method that will be employed to tell the story of the project and its results. An action research proposal is therefore different from other kinds as a far greater proportion is methodological than substantive, which is the opposite of a traditional research proposal.

A research proposal is usually focused on a question, often deductively derived from a theory, but when it is possible to prespecify the aim of the action research, it will always be one of the, *"How can I/we improve this practice?"* variety. It is surprising how often research students who have had a traditional training try to begin their work with a descriptive of evaluative question. For instance, I was recently working with a group of curriculum consultants in an Asian school system, and their action research question was initially drafted as, "*Does our fieldwork project provide opportunities for students to gain a deeper understanding of the world around them?*" As this was a descriptive 'researched action' question, and not an action research question, so we reworked it as, "*How can we use our fieldwork project to enable students to gain a deeper understanding of the world around them?*"

In order to plan what to do in the first action research cycle, they then needed to find out more about the current situation, so we asked a reconnaissance or situational analysis (research) planning question: *What is the current situation in terms of aims, resources and student characteristics?* Answers to this would inform their first action research cycle action planning question which was informed and specific: *"Will doing ___ in our fieldwork project enable students to gain a deeper understanding of the world around them?"* The other action research planning question that needs to be asked is how best to monitor the results, in this case: "*How will we know whether doing ___ in our fieldwork project did enable students to gain a deeper understanding of the world around them*? Their answer to this will be the research

design for this cycle, and, group interviews and analysis of the students' assignments are two obvious strategies for this cycle.

The production of professional knowledge should also be a spin off of action research, and in designing and implementing fieldwork activities to deepen their students' understanding of the world around them, the staff would learn a lot about the fieldwork situation, their teaching and the students' learning. That knowledge would remain private, experiential and unarticulated unless they also planned to collaborate in codifying that knowledge by answering a question such as, "*How (or Why?) did students gain (or not gain) a deeper understanding of the world around them from doing ____ in our fieldwork project?*" And thinking of the knowledge management process, we could also add, "*What could others learn from our experience?*"

Note that although it appears to be a more traditional research question, their answers would be very useful in planning their next cycle, either to improve what they did in the first cycle, or to find other ways to enable their students to gain a deeper understanding of the world around them. The action researchers should draw upon the published research literature to help answer that question, and also disseminate their findings. That is how practitioners can use action research to bridge the theory – practice gap both ways, using and contributing to the literature which are both important aspects of university dissertation work.

When facilitating action research it is important for the facilitator to also action research their facilitation, not just to improve their facilitation, but also to demonstrate excellent practice in action research to the facilitatees (Tripp, 1996). This means that the two action research projects (referred to by Elliott (1991:30) as 'first and second order action research'), can operate synergistically, each leading to better understanding and improvement of the practice of the other. When this is the process of an action research dissertation the stories of both projects can be told simultaneously, producing what Wildman and Cundy (2002) term 'the esoteric thesis'.

The action research report

The following is a outline of a typical action research case study report, which can be used for any project and is also appropriate for dissertations.

1) Introduction: researcher's intentions and anticipated benefits.
2) Reconnaissance (fieldwork investigation and literature review)
a-the situation
b-the participants (self and others)
c-current professional practices
d-initial thematic concern and focus.
3) Each cycle
3.1) Planning: from thematic concern (or previous cycle) to first action step
3.2) Implementation: narrated account of who did what, when, where, how and why.
3.3) Research Report on results of planned improvement
a- outline of & rationale for method/s of data production
b- presentation & analysis of data
c- discussion of results: explanations and implications.
3.4) Evaluation
a- of change in practice: what worked or did not work and why
b- of the research: how useful and appropriate it was
4) Conclusion
4.1) Summary of what practical improvements were achieved, their implications, and recommendations for one's own and others' professional practice.
4.2) Summary of what was learned about the action research process, its implications, and recommendations for doing the same kind of work in future.

How effective is action research?

I have on several occasions been asked if I could point to any thorough, objective and

well-regarded evaluation of the effectiveness of action research as an improvement method. I couldn't, and feeling I needed a more adequate response next time, I asked the question on the action research email discussion list moderated by Bob Dick of Southern Cross University <arlist-l@scu.edu.au>.

There was a marked lack of response, apart from Jack Whitehead of the University of Bath, who, like myself, could only point to proof in the form of all the reports of successful action research projects being published on his *site*[2] and elsewhere, eg., OISE[3] (2005), McNiff (2002). But that wasn't what I hoped to find. With all of the action research that has been done over the past 50 years, I thought that surely someone had done some kind of a meta-analysis of the effectiveness of action research, evaluating its efficacy in achieving its aims (such as the improvement of practice, and the generation of knowledge). After all, even advocates of Yoga or Transcendental Meditation had taken the trouble to show that it really does reduce blood pressure and people are happier for doing it.

In view of my concern to establish action research as an academically well-regarded research strategy, I spent a whole day on the internet and looking at the recent publications in the library. Though there are literally thousands of positive reports of successful action research, there was nothing I could find that evaluated the process in terms wider than its use in a particular program or project.

My initial hypothesis was that what gets written up is people's experiences of successful action research, and once the literature is full of success stories, it doesn't make research into its effectiveness seem very worthwhile as we already appear to have the (over-determined) answer.

That may be so, but there are also action research projects which have failed, mine included, though whenever I have investigated these it has never been because of unsoundness in the basic process (i.e. the action research cycle), it has always either because of poor use of the cycle (for example, no reconnaissance was performed or planning was inadequate), or because of contextual factors (for example, people did not have time to complete the project, or the situation changed and they went on to something else).

I saw this as similar to cars: no one would contest the fact that they are a reasonably reliable mode of personal transport, but that doesn't mean that they are always appropriate, they do not crash or break down, they are not driven badly, and so on. When these failures do occur, it is not to a failure of cars as such, but of a particular car, used for a particular purpose, by a particular person, and so on. I think it's the same with action research.

Moreover, so many people use it successfully that if one were to challenge it, one would come up against the power of the proof of personal experience. Lippitt found much the same in 1945: "... [participatory] projects can be counted on your fingers and over half of them failed. The others were dramatically successful. Many others will fail until there is recognition that this is not a simple process" (Cooke, undated:7). Action researchers might be interested in the extent and variety of its use, but they're not much interested in any external assessment of its overall success. I'm like that: I like to know who is using it where, with whom, for what, and so on; but my response to people who say to me that action research doesn't work (as they sometimes do) is, *Well, it works effectively for me; if it doesn't for you, maybe that means you're not doing it right.*

Furthermore, I think that the lack of research into the effectiveness of action research has to do with the fact that action research is so commonsensical that it doesn't make sense to challenge its effectiveness. How could anyone seriously argue with the

2. http://actionresearch.net.
3. http://leo.oise.utoronto.cal/˜ibencze/Action_Research_Help.thml.

following (Tripp, 1996):

> It's important not to view action research as a totally new strategy to do something quite different, but as more of a means to turbo-charge our usual learning from experience. I like that metaphor because we all learn from experience, so it's about doing what comes naturally . . . but action research is a way of doing it better:
>
> • we all plan our action, but we can do so more deliberately, imaginatively, and on a better understanding of the situation;
> • we all act, but we can experiment more, rely on established habits less, and act more responsively;
> • we all observe what happens, but we can get more and better quality data, we can obtain more feed-back from different others, and we can do so more systematically;
> • we all think about what's happened, but we can also improve our reflection, question our ideas of what's important, and go deeper and more critically into things;
> • we all learn from experience, but we can also record what we have learned in order to clarify it, disseminate it to colleagues, and add it to the stock of professional knowledge in teaching.

It's when we do all five of those things better that we make real improvements to, and learn much more about, our professional practice.

In short, I came to realise that there's not much point in asking the general question, *How effective in action research?* when the answer is, *It's as effective as the people doing it make it.* For action research practitioners the appropriate question is, *What will assist or hinder the effectiveness of my action research*? It is a question to which there is no definitive answer, so it is one which we must working to answer whenever we commit ourselves to an action research project.

Conclusion

In this paper I have outlined what I regard as the key characteristics of the action research process, and made a case for using the term 'action research' in academia to refer to a version of action inquiry that clearly meets the criteria of academic research. That seems to be in line with early work in action research, and indeed with later definitions such as Elliott's (1991: 69) 'the study of a social situation with a view to improving the quality of action within it'.

Definitions are an instrument of power, and in arguing for a particular meaning to be attached to the method, I recognise the danger of appearing to be making an attempt to override the current 'multi-paradigmaticism' with a new dominant ideology that would create another hierarchy of quality in action research (Heikkinen, Kakkori and Huttunen, 2001:22). On the contrary, this paper aims to further an open and informed discussion about what constitutes action research, with a view to improving the method and widening its use by legitimating it as a form of practitioner research ideally suited to academic dissertation and project work.

So although the proposal is not without its critics, I do not resile from seeing action research as a variety of action inquiry in which research techniques of sufficient quality to withstand university peer critique are employed to inform the planning and evaluation of improvements.

Perhaps the way forward, therefore, is to find another term for the kind of action research outlined here in the same way that the term 'participatory action research' is used. Boomer (1985) neatly differentiated between the kind of research engaged in by university academics and the everyday use of the term as 'Big R research' and 'Little r research'. Perhaps we could refer to 'Big-R' or 'dissertation' action research' to distinguish it from the kind of everyday reflection in practice that is so often referred to as action research these days.

References

Altrichter, H., P. Posch and B. Somekh (1993) Teachers Investigate Their Work. London: Routledge.

Argyris, C. (1985) Action Science, Concepts, methods, and skills for research and intervention. San Francisco: Jossey Bass. Now available as a free download from: http://www.actiondesign.com/action_science/index.htm.

Argryis, C., R. Putnam and D. McLain Smith (1985) Action Science: Concepts, Methods, and Skills for Research and Intervention. New York: Jossey Bass (Out of print: http://www.actiondesign.com/action_science/).

Argyris, C. and D. Schon (1974) Theory in practice. San Francisco: Jossey Bass.

Boomer, G. (1985) Addressing the problem of elsewhereness: A case for action research in schools. 121-129 in Fair dinkum teaching and learning: Reflections on Literature and Power. New Jersey: Boynton/Cook.

Brown, A. and P. Dowling (2001) Doing research/reading research: A mode of interrogation for teaching. London: Routledge Falmer.

Buckingham, B. R. (1926). Research for teachers. New York: Silver, Burdett and Co

Berge, B-M. with H. Ve (2000) Action research for gender equity. Buckingham: Open University Press.

Carr, W. and S. Kemmis (1986) Becoming critical: knowing through action research. London: Falmer Press.

Chambers R., (1983). Rural Development: Putting the Last First. Longman Press, London.

Checkland, P. and S. Holwell (1998) Information, Systems, and Information Systems: Making Sense of the Field. Chichester, UK: Wiley.

Chein, S., S. W. Cook and J. Harding (1948) The field of action research. American Psychologist 3 33-44.

Cooke, W. (Bill) (undated) A Foundation correspondence on action research: Ronald Lippitt and John Collier. Produced by Working Paper No.6/2002 of the Institute for Development Policy and Management. http://www.sed.manchester.ac.uk/idpm/publications/wp/mid/mid_wp06.htm [Accessed: June 2005]

Cooperrider, D. L.; S. Shrevasteva (1987) Appreciative inquiry in organisational life. in Woodman and Pasmore Research in organizational change and development: JAI Press.

Corey, S. M. (1949) Action research, fundamental research and educational practice. Teachers' College Record 50 509-514.

Corey, S. M. (1953) Action research to improve schools practices. New York: Columbia University: Teachers College.

Deming, W. E. (1986) Out of the Crisis. MIT Press.

Deshler, D. and M. Ewert (1995) Participatory Action Research: Traditions and Major Assumptions. The PAR Tool Box @ http://www.PARnet.org/parchive/docs/deshler_95/ [Accessed May 28 1995 but no longer available].

Dewey, J. (1933) How we think. Buffalo, New York: Prometheous Books.

Dick , R. (2000) email to: Multiple recipients of list <areol-d-l@scu.edu.au> Subject: [AREOL-D-L:2182] Trigger 12

Elliot, J. (1994) Research on teachers' knowledge and action research. Educational Action Research 2 (1) 133-137.

Elliott, J. (1991) Action research for educational change. Philadelphia: Open University Press.

Elliott, J. (2000) Towards a synoptic vision of educational change in advanced industrial societies. In H. Altricher and J. Elliott Images of educational change. Buckingham: Open University Press.

Elliott, J. and Adelman, C. (1976) The Ford teaching project. Cambridge: Cambridge Institute of Education.

Fals-Borda O. (1985). Knowledge and people's power. Indian Social Institute, New Delhi.

Fals-Borda, O. and M. A. Rahman, Eds. (1991) Action and knowledge: Breaking the monopoly with participatory action research. London: Intermediate Technology.

Freire P. (1982). Creating knowledge: A monopoly. Harper, New York.

Freire, P. (1972) Pedagogy of the oppressed. Harmondsworth: Penguin.

Grundy, S. J. (1982) Three Modes of Action Research. Curriculum Perspectives 2(3) 23-34.

Grundy, S. J. and S. Kemmis (1982) Educational action research in Australia: the state of the art. Geelong (Australia): Deakin University Press.

Hart, E. and M. Bond (1997) Action research for health and social care: A guide to practice. Buckingham: Open University Press.

Heikkinen, H., L.T, L. Kakkori and R. Huttunen (2001) This is my truth, tell me yours: Some aspects of action research quality in the light of truth theories. Eduational Action Research 9(1) 9-24.

Heron, J. (1987) Co-operative inquiry. Thousand Oaks: Sage.

Jacques, D. (1992) Learning in groups. London: Kogan Page.

Kemmis, S (1981) Joint statement from the Educational Research and Development Council's National Invitational Conference on Action Research, Deakin University. Cited in Grundy and Kemmis, (1982) Educational Action research in Australia: the state of the art (an overview), 83-97 in S. Kemmis et al (ed.) The Action Research Reader, Geelong (Australia): Deakin University Press.

Kemmis, S. and R. McTaggart (1990) The Action Research Planner. Geelong (Aust): Deakin University Press.

Ker, P. (1999) Appraisal and teacher development: it ain't broke - it just won't work. Paper presented at the Annual HERDSA Conference, Melbourne. Produced by The Higher Education Research and Development Society of Australasia, Melbourne, Australia. http://www.herdsa.org.au/vic/cornerstones/abstracts/ker.html [Accessed: October 2001]

Kolb, D. (1984) Experiential learning: Experience as the source of learning and development. Englewood Cliffs, New Jersey: Prentice-Hall.

Kuhn, T. S. (1970) The structure of scientific revolutions. Chicago: University of Chicago Press.

Lammerink, M., P. Bury and E. Bolt (1998–2003) An introduction to participatory action development. Produced by IRC International Water and Sanitation Centre. http://www.irc.nl/products/planotes35/pnts6.htm [Accessed: 20 June 2003]

Lewin, K. (1946) Action research and minority problems. Journal of Social Issues 2 34-36.

Lippitt, R., J. Watson and B. Westley (1958) The Dynamics of Planned Change. New York: Harcourt Brace.

Marquardt, M. J. (1999) Action learning in action: Tranforming problems and people for world-class organizational learning. Palo Alto, Calif.: Davies-Black.

McCutcheon, G. (1988) Curriculum and the work of teachers. in M. W. Apple and L. Beyer The curriculum: problems, politics, and possibilities. New York: SUNY Press.

McNiff (2002) Action research for professional development: Concise advice for new action researchers. http://www.jeanmcniff.com/booklet1.html [Accessed: January 2004]

McNiff, J. Action research website. http://www.jeanmcniff.com

Ontario Institute for Studies in Education (O.I.S.I.E.) Action research website. Produced by Ontario Institute for the Study of Education. http://leo.oise.utoronto.ca/~lbencze/Action_Research_Help.html [Accessed: June 2005]

Revons, R. W. (1971) Action learning: new techniques for managers. London: Blond & Briggs.

Rogers, C. (2002) Defining reflection: Another look at John Dewey and reflective thinking. Teachers College Record 104(4) 842–866.

Rothman, J. (1999) Home page of the Action Evaluatuation Institute. Produced by. http://www.aepro.org/ [Accessed: 18 November 2002]

Sachs, J. (2003) The Activist Teaching Profession. Buckingham: Open University Press.

Schön, D. (1983) The Reflective Practitioner: How Professionals Think in Action. New York: Basic Books.

Selener, D. (1992) Participatory action research and social change: Approaches and critique. New York: Cornell University.

Senge, P. (1990) The fifth discipline: the art and practice of the learning organization. New York: Doubleday-Currency.

Somekh, B. (2003) Theory and passion in action research. Educational Action Research 11(2) 247-264.

Stead, V., M. Mort and J. Davies (2001) Theory generation and practice improvement: A mental health perspective. Educational Action Research 9(1) 61-77.

Tikare, S., D. Youssef, P. Donnelly-Roark and P. Shah (2001) Organizing Participatory Processes; in The World Bank Participation Sourcebook. Produced by World Bank. http://www.worldbank.org/participation/keyconcepts.htm [Accessed: 10/07/2003]

Tillotson, J. W. (2000) Studying the game: Action research in science education. The Clearing House 74(1) 31-35.

Tripp, D. (1990) The ideology of educational research. Discourse: The Australian Journal of Educational Studies 10(2) 51-74.

Tripp, D. (1992) Socially critical educational research, Issues in Educational Research 2(1) 13-23.

Tripp, D. (1993) Critical incidents in teaching: The development of professional judgement. London and New York: Routledge.

Tripp, D. (1996) The SCOPE Program' (An Action Inquiry Program for supporting professional-practical workplace learning). Perth: Education Department of WA (National Professional Development Program). (Now from Centre for Learning, Change and Development: Murdoch University.)

Tripp, D. (1998) Ethics in action research. http://www.scu.edu.au/schools/gcm/ar/TrippEthics.pdf [Accessed January 2003]

Tripp, D. with Wilson, J (2001) Critical incidents in action research in education. 121–132 in S. Sankaran, R. Dick, R. Passfield and P. Swepson, Effective change management using action research and action learning: Concepts, Frameworks, Processes and Applications. Lismore: Southern Cross University Press.

Whitehead, J. Action research website at the University Bath. http://www.actionresearch.net [Accessed: August 2000]

Whyte, W. F. (1964) Action research for management. Homewood, Ill: Irwin-Dorsey.

Whyte, W. F. (1991) Social theory for action. Beverly Hills: Sage.

Wildman, P. and L. Cundy (2002) The esoteric thesis: making inner sense of the ineffability of knowledge obtained during the exoteric research process. ALAR Journal 7(2) 3-21.

David Tripp is professor associated of the college of education of the University of Murdoch, in Australia. It has carried through, in diverse countries works with the practical reflexive and the research-action in programs of continued education of professors. Is associated publisher of the Educational Action Research Journal; e member of the managing committee of the Action Learning, Action Research, and Process Management Association.