

Use of the Action-Research Methodology in the Development of Accounting Education

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Abstract

Both accounting and education have developed throughout this century under the influence of the scientific methodology which has served the natural sciences well in their recent developments. We argue that an over-reliance on the scientific methodology has not allowed accounting education to develop optimally and that other perspectives on educational research are available which can identify developments which might improve the academic environment. One methodology which we believe has encouraged worthwhile developments in our own educational environment is action-research. This methodology appears to have grown in popularity with academics generally, and in educational research particularly, over the past few years. Here we provide reflections concerning the use of it in the accounting education environment and hope that we can encourage others to make use of it.

Introduction

As contemporary university academics we continue, like many others, to attempt to make sense of and improve our teaching roles. Two of the authors are accountants, and the third is an educationalist heading the Teaching and Learning Development Unit at our university. We have prepared this paper to present, and encourage, the use of the action-research methodology in projects concerned with the development of education, with specific reference to a university accounting course.

The term "*action-research*" is not uniquely defined; rather it embraces a collection of similar methodologies. We describe its characteristics and a critique is provided. The benefits of employing the methodology in the classroom are discussed.

What is action-research?

The lack of one, universally accepted definition of action-research does allow a broad range of related techniques to meld and develop with usage over space and time. However, the lack of a singular definition becomes problematic when users of action-research seek to describe their methodology. Nevertheless it is possible to provide sympathetic readers with some appreciation of what the methodology involves, firstly in a general sense and then more specifically within education, and then from our perspective of its use within accounting education.

The World Congress on Action Research (1989) attempted to capture the essence of *action-research*, and stated:

If yours is a situation in which:

- *people reflect and improve (or develop) their own work and their own situations*
- *by tightly interlinking their reflection and action*
- *and also making their experience public not only to other action-participants but also to other persons interested in and concerned about the work and the situation (i.e. theories and practices of the work and the situation)*

and if yours is a situation in which there is increasingly:

- *data-gathering by action-participants themselves (or with the help of others) in relation to their own questions*
- *action-participation (in problem-posing and in answering questions) in decision making*
- *power-sharing and the relative suspension of hierarchical ways of working towards industrial democracy*
- *collaboration among members of the group as a "critical community"*
- *self-reflection, self-evaluation and self management by autonomous and responsible persons and groups*
- *learning progressively (and publicly) by doing and by making mistakes in a "self-reflective spiral" of planning, acting, observing, reflecting, replanning¹*
- *reflection which supports the idea of the "(self-) reflective practitioner"*

*then yours is a situation in which **Action Research** is occurring (Altrichter et al., 1989, p. 19)*

The fact that this exercise-in-definition was considered a necessary and useful project at the Congress, and the cumbersome outcome, provide evidence of the difficulty of finding an accepted and all-encompassing definition of action-research. However, a large literature on action-research has developed² and there is close agreement as to its main characteristics. Key aspects of the methodology are summarised below, it:

- *is concerned to critique what "is" and examines "what is" from a holistic perspective.*
- *seeks to close the gap between theory and practice.*
- *does not assume that there is an ideal state awaiting discovery, but that the research process itself allows progress towards an ideal.*
- *requires extensive communicative processes before action.*
- *suggests a research cycle involving: an initial overview, followed by a detailed critique of systems in order to gain enlightenment and provide a base from which to plan strategies.*
- *is an iterative process.*

Action-research avoids the opening of the theory/practice gap, because theory and practice are developed together and in unison. Action-researchers maintain that, "there is nothing so practical as a good theory" (Greenwood, et al., 1993, p. 187).

¹ Lewin in the 1940s first developed what have become four, widely-agreed elements in the action-research cycle: plan changes, act and observe results, reflect on the outcomes, and revise the plan (Elliott, 1982; Kemmis and McTaggart, 1988; Lewin, 1952). They have been used in many working environments including education (for example Stenhouse, 1980).

² For example: Elliot, 1982; Kemmis and McTaggart, 1988; Kember and Kelly, 1993; McKernan, 1991; Stenhouse, 1980; Whyte, 1990.

Ledford and Mohran (1993) point out that one of the central issues in action-research is the recognition that socially active participants create and define their own realities. Creating realities demands action, the substance of action-research is action, and every action-research project must recognise this. Action-research is not simply an interpretivist methodology, the participants are challenged to go beyond an understanding of what "is" to an investigation of what "might become", and to create this. The broader the participants can cast their minds in determining what might become then, potentially; the better can be the results. We see this as being crucial to university education, and accounting education in particular. Society will almost certainly continue to be characterised by rapid change and by diminished traditional anchors such as ethical/moral/religious/social codes. Accounting education must respond to these changes by promoting ideologies that allow the students to emerge as independent learners, challenging and changing society.

A Critique and Counter-Critique of Action-Research

Mainstream organisational research generally allows one set of people (the researchers) to study another set of people (the subjects). There are several reasons why such research is unlikely to provide practical outcomes useful to those being researched (Bartholomew, 1972). The action-research methodology makes educational research an integral part of educational practice, **thereby** improving the chances of the outcomes being relevant to the practice of education. Changes are proposed, and some are instigated, by individuals who function in the changing environment. The researchers are well placed to reflect on the effectiveness of any changes.

The action-research methodology is more 'realistic' than many other research methodologies because it is based at the local level where the people involved are fully aware of, and able to talk about, 'real'³ problems. It requires the involvement of the individuals who normally function in the area being researched. It entails active discussions with these people. It necessitates bringing these people and their ideas into the research project, not just at the observation end, but also into the design and framework setting stages of the research project.

Action-researchers do not attempt to build grand theories. They aim to build transient local theories to help individuals better to understand, control and profit from their environment. The measures of 'understanding', 'control' and 'profit' are to be made by the individuals in the research environment rather than by researchers in distant offices.

Action-research is not appreciated by some, it: "is resisted by entrenched interests... It challenges the 'expert' authority of academic educational researchers... It challenges bureaucratic authority in its notion of participatory control" (Carr and Kemmis, p. 210). Many orthodox social science researchers are not pleased with the advent of action-research; they attempt to discredit it. With action-research the researcher must be "...willing to relinquish the unilateral control that the professional researcher has traditionally maintained over the research process" (Whyte, 1990, p. 241). The major way orthodox researchers respond to the challenge of action-research to their hegemony is to state that they do "science" while action-researchers merely "tell stories" (Greenwood et al., 1993). However, the narrative dimensions of supposedly "objective" social scientific accounts have been successfully demonstrated elsewhere and 'exposed'

³"Real" in the sense that the problems have meaning in the decision making models of the people involved, concerning how they organise their lives.

for what they are, for example: Bourdieu, 1984; Clifford and Marcus, 1986; Habermas, 1984; Mitroff and Mason, 1981.

Action-research is sometimes criticised for 'obvious' bias because it involves the researcher in analysing his or her own practices. Such criticism implies that there is a neutral (value free) point from which 'proper' research can be conducted; we believe any such point is illusory, "There is no objective knowledge of reality... reality can only be known through our constructions which are subject to constant revision; we do not have direct access to an interpretation-free reality" (Zuber-Skerritt, 1992, p. 56).

Narratives emanating from action-research environments provide vicarious learning experiences for their readers. However, it must be recognised that researchers bring their own biases to models which they create in attempting to understand and describe their environments. These biases will influence the researchers' 'skeletal'⁴ generalisations concerning the reality in an environment. Nevertheless, the skeletal generalisations can provide useful insights to others with similar interests.

Action-research treats the 'actors' as both the bearers and the victims of ideologies. It recognises the actors' ability to change the world. The collaborative nature of action-research can offer an approach to overcoming those aspects of the existing social order which frustrate rational change. Action-research is, "The expression of individual self-reflection which contributes to community self-reflection both by extending and by challenging the formation of common practices, theories and institutional structures" (Carr and Kemmis, p. 205).

The use of action-research in education

McNiff (1988) has specifically targeted education when she describes action research as:

.. an approach to improving education, by encouraging teachers to be aware of their own practice, to be critical of that practice, and to be prepared to change it. It is participatory, in that it involves the teacher in his (sic) own enquiry, and collaborative, in that it involves other people as part of a shared enquiry. It is research WITH, rather than research ON (p. 4).

Zuber-Skerritt (1992) terms action-research within the classroom "action learning" and describes action learning as:

A process by which groups of people... work on real issues or problems, carrying real responsibility in real conditions. The solutions they come up with may require changes to be made in the organisation, and they often pose challenges to senior management, but the benefits are great because people actually own their own problems and their own solutions (p. 48).

Action-research then is the study of a social situation in order to improve the quality of action within it. It involves self-evaluation and professional development. Gibson (1986) advocates the use of action-research better to understand education, and close the gap between theory and practice:

In the traditional view [of education], 'theory' has been applied to 'practice'... The insights and concepts of, for example, psychology or sociology have been drawn upon to

⁴ 'Skeletal' is used here metaphorically to signal the incompleteness of any general theory. The skeletal framework can be fleshed out within chosen empirical research locations, but >whole beings= thus created must be considered to have no more than local meaning. The skeletal framework will itself remain more stable, enduring and transferable.

explain, inform or direct practice. Both action research and critical theory challenge this approach as they urge the fundamental indivisibility of theory and practice. Theory is in all practice, is grounded in it (p. 162).

Carr and Kemmis (1986) suggest that action-research provides an excellent educational research methodology because:

The purpose of educational research is to develop theories that are grounded in the problems and perspectives of educational practice (rather than the problems and perspectives of some social scientific practice) (p. 122).

The action-research perspective can reveal different images concerning curricula, different suggestions concerning who is best placed to develop curricula, and different ideas concerning the roles of course 'controllers'⁵. Carr and Kemmis recommend applying action-research to education because:

1. Educational theory must reject positivist notions of rationality, objectivity and truth.
2. Educational theory must be rooted in the self-understandings of educational practitioners.
3. Education theory must distinguish ideologically distorted interpretations of practises and overcome them.
4. Education theory must expose those aspects of the existing social order which frustrate the pursuit of rational goals.
5. Educational theory must recognise that it has to relate to practice.

(Extracted from chapter 5)

The Need for Change in Accounting Education

The two accountants in our team were educated in an environment where their lecturers had knowledge of the 'correct way' to perform accounting tasks (e.g. group consolidations, linear programming modelling, and taxation calculations). The two proved they had successfully acquired these skills from their lecturers by passing the required examinations, and went on to be certified as "chartered accountants".

In the current world it is still necessary for students to acquire such skills but even twenty years ago the two accountants felt themselves ill-prepared by their university educations for the commercial world which they graduated into. Today it is even more necessary for accounting students to graduate from university with more than a mechanistic knowledge of how to apply currently accepted rules to well-structured classroom exercises. Accounting graduates need to be aware of the societal dimensions of accounting practices.

In our contemporary society individuals are assailed from every angle by divergent and contradictory value claims. Traditionally accounting education has been dominated by the perspective of training students to know facts and techniques - often a narrow and limiting perspective. We should be empowering students by fostering independent learning. We believe many accounting students are disadvantaged because the education they receive (in some sort of passive knowledge transfer) does not actually prepare them for the realities of living in contemporary society, and helping to build a holistically-better society.

The two accountants realised that their senior students required to be prepared better for the commercial world and enlisted the help of their colleague with educational expertise. Adopting an action-research approach to determining how best to improve

⁵In the action-research environment "course facilitators" may be a better title for these persons).

accounting education encourages holistic thinking, opening up educational practices and research to rational, psychological and spiritual values. Lecturers must remain in control of their courses but they can benefit from regular discussions with their students concerning the strengths and weaknesses of the courses. Courses can repeatedly be re-tailored better to encourage the personal development of the different students involved.

Action-researchers recognise that all concerned in the classroom situation, especially the students, should be encouraged to help challenge and shape the social system in which they live. This perspective can benefit graduates in their future employment environments. Thus rather than being value neutral (a perspective once actively encouraged in students of Accounting) students select problems to solve that contribute to practice, and are concerned with democratic, humanist values. McKernan (1991) notes that action-research is expressly political because it seeks continuous change in the environment being studied:

Critical action research is seen as a politically empowering process for participants; the struggle is for more rational, just and democratic forms of education... As a theoretical activity it invites... practitioners to consider... the totality of relationships within the social system and structure of the society in which they live and work (p. 27).

As educators we are responsible for initiating iterative changes and noting their effect in improving the environment. We recently adopted an action-research approach to the development of a final year accounting course, ***Accounting, Organisations and Society (AOS)***. We have completed five iterations, each one adapted in response to student/teacher interactions. The adaptations occurred within a framework set by the University system (for example, formal grading systems) but the educational practices were developed and refined in a participative, interactive programme.

It is because of the power of action-research in challenging assumptions that it is potentially so useful in reshaping current practices in tertiary education (and hopefully the environments of working accountants), and thereby providing the opportunity for greater productivity in learning. Action-research requires the active participation of those who have to carry out the work which they identify and anticipate. The group must also agree as to how 'progress' will be monitored.

Action-Research and the AOS Course

Students are required to participate in deciding what is to be learned, how the learning is to take place and how it is to be measured. Students are encouraged to design their own learning objectives (within set limits) and share them with their colleagues. The course has six main academic activities (or 'modes of learning')⁶:

1. ***Basic weekly readings (set by course facilitator) and production of précis (e. g. Hines, 1988).***
2. ***Expositions of articles (chosen by students), in pairs, to the rest of the class.***
3. ***Small-group Project (empirical work concerning a societal issue selected by the group).***
4. ***Dialectical enquiries (argument concerning societal issues).***
5. ***Discussions with visitors (e. g: CEOs - Ernst & Young, New Zealand Chamber of Commerce).***
6. ***A substantial individual assignment or a "final-test".***

⁶It is impossible to provide full details of the course and how it has developed within a journal article. Interested parties are invited to contact the authors for further details.

The grade weightings attaching to each of the above activities are discussed with each iteration of students. The course facilitator suggests weightings for each, but final weightings are agreed with the students by the end of week three in each iteration. Students are not told exactly what they have to learn in order to obtain a good grade. Some students have complained about this lack of ‘certainty’ because they ‘appreciate’ clear indicators of what they ‘must’ learn. This course does not attempt to provide such clarity, it attempts to help students identify ‘targets’ for themselves, and help them develop their abilities to progress.

The course is improved by listening to the students and, after discussion, making appropriate changes. The process of change does not stop when the ‘ideal’ course is produced because what is ‘ideal’ is ever-changing. Below we provide brief student feedback on each of the modes of learning currently used on the course. This feedback has convinced us that the course is developing well. We have dropped “self-assessment tests” as a mode of learning, and reduced the volume of weekly readings from several articles to one, in response to adverse student feedback.

Précis

The précis relates to the weekly readings, which are chosen by the course facilitator. The students have commented:

The readings greatly influenced my learning experience. It was like someone giving me a key to a door; when I opened the door of learning I was so excited.

The social construction of the accounting profession by Ruth Hines challenged my belief in the accounting profession for the first time since I have attended university... This has not made me disillusioned with the profession but it has added a different dimension to how I view the profession I will soon be entering.

By developing and communicating my opinions [on the set readings], I retained more knowledge of the topics. I can now apply the ideas I generated in reading the articles, in this and other courses... The knowledge will stay with me when I leave the university. The précis encourages a full understanding of each reading... and promotes personal thinking of the topics at hand.

Expositions

The articles to be presented are chosen by the student presenters but they must be within the broad area occupied by the set reading for the week. For example Hines (1988) is presented in the area of *Accounting as a Social Science*. The presenters must present another article on that theme.

It is useful to develop your public speaking ability and the expositions certainly do this. They also encourage use of visual aids and your ability to present information accurately, and in an interesting way. Speaking in front of a group also promotes your self-esteem and your understanding of other people.

From the discussions in class I realised that it is critical to talk to people and listen to their opinions. Then slowly we will be able to form our own beliefs... [because] we will be justifying our arguments while we talk to them ... We must have faith in ourselves. If we do not trust ourselves how can we expect others to trust us as accountants?

Small-Group Project

The students work in groups of three to five to produce a report on local-issues in dispute. Examples of selected projects include: Gold Mining in New Zealand, Funding of Mental Health Services, Building a Casino in our City.

I have really appreciated the small group project. Apart from enjoying working with others and the challenges involved in group work I appreciate the lack of real structure in the group project. I liked the way we could choose our own topic, design our own project according to what we wanted or felt necessary and then just be left alone to get on with it. This is the first course in which I have experienced no structural requirements in a group project. I know I have (and I am sure my colleagues have) enjoyed the independence and autonomy involved in the production of these reports.

I have enjoyed the teamwork. Working in teams presents a challenge in itself, and communication becomes even more important. I have appreciated the opportunity to be able to research and undertake a project of our choice. It is a lot easier to get motivated in completing a project when you first have a personal interest in the topic.

Dialectical Enquiries

Every other week throughout the semester the students meet in groups of six for a two-hour session. Two of the students come with a prepared statement on a topical issue e.g. gold mining is bad for the environment. Another two students arrive with a different way of 'seeing' the situation e.g.; the viability of the township of Waihi would be threatened if gold mining ceased. With the third pair acting as synthesisers the group then attempts to construct a synthesis concerning how best to progress from their two starting positions.

The most valuable part of the course for me was the dialectical enquiries, from the first week my views of society and socially constructed reality were challenged... I can see and understand things from a perspective that until this year was foreign to me.

Dialectic enquiries... at first seemed very difficult to understand but as our group progressed they became a very interesting area of discussion/argument on controversial issues. The biggest strength of the sessions was in understanding how people can view the same problem differently depending on their assumptions, background and experiences.

Dialectical enquiries provide a good foundation for intellectual expansion... Everyone is trained to argue for what they believe is right and fight for it until they develop a better perspective or synthesis. This meets the overall objective of the course which is designing our own learning opportunities and sharing them with others.

The dialectical enquiry sessions provided us with the opportunity to work in a group environment where conflict is present. I feel these sessions were an imitation of situations we will frequently find ourselves in during our working careers. The important thing to discover was if other people's views are capable of progressing your own in any way... Time and again I found myself relating our discussions to the discussions which might take place around a board room table.

Discussions with Visitors

Each semester the class receives five visits from five prominent business people. The visitors provide handouts which are distributed prior to their visits. The handouts contain brief details of the visitors and their jobs. In class the visitors are asked to speak to the students for about ten minutes. Thereafter they are asked to respond to questions prepared by the students. This format has evolved by student request and the two hour

sessions are always filled with abundant questions.

I appreciated the visitors' seminars. I found these very interesting and informative because I got an idea of what it is like in the 'real world'. The interaction with guest speakers provided a good balance between the theoretical and practical education I am receiving... The visitor sessions taught me about the reality of the business environment.

I learned to speak out and become more extrovert. I learned to challenge the speaker to clarify his or her answers whenever I was dissatisfied with the answers given. These seminars are what I loved and treasured.

These sessions really helped widen my scope of thinking. I used to think that being accountants our responsibilities... [involve only] following the rules set by professional bodies. Now I realise that accountants are in a dilemma... They are torn between upholding their status as professionals and best serving the business community.

Final test

Students are provided with the choice of a final-test or a substantial individual assignment. It is now becoming clear that students prefer the type of test which is associated with this course (rather than the individual assignment) but we will keep the choice available to future students. The class tests have earned a good reputation. The test questions are always unique but they all require the students to reflect on their course experiences and provide feedback to the lecturers.

The test is good in that it is not about regurgitating 'facts' but is about giving opinions which is in keeping with the course.

It has given me the chance to reflect on the course and its effectiveness. At the start of the course I was totally lost as to the point of the course. It did not seem like we were going to learn anything. Now I can see that I have learnt something. I learnt how to think for myself and to set my own guidelines rather than being told what to think by a lecturer.

The test has allowed me to consider jointly and separately all the aspects that make up the learning experience of this course... The course has provided an excellent learning environment and one which allows the student to enhance their understanding of not just accounting, organisations and society, but also the role that the student will eventually play in that society.

Not all of the feedback that we receive is favourable. As already stated some students complain that the course does not state precisely what is required in order for them to obtain good grades. Other students complain that they would have taken a sociology or philosophy course had they wished to, but having taken an accounting course they are surprised at what is expected of them. A third group of complainants are annoyed because they repeatedly have their positions challenged, and seldom seem to be allowed to reach closure on the issues which are discussed. We do not feel able to provide a satisfactory response to these complaints because the complaints reflect the problems that most accountants face in their working lives. Our course is attempting to prepare students for such lives and this 'fact' provides our best response to them.

Some final thoughts

There are some obvious problems with the introduction of the flexibility demanded by action-research into a structured educational environment. It is possible that some students, and some colleagues, may not appreciate such flexibility. However, we have benefited from the approach and found none of the problems insurmountable.

It does require courage to arrive at the first meeting of a class and commence by asking fee-paying students what direction they would like the class to take rather than providing them with clear instructions concerning exactly what they will be required to learn in order to obtain a good grade. Furthermore, once choice in class is opened up to students it may be difficult to achieve consensus. The 'facilitator' may find him/herself having to accommodate the supervision of several different paths to knowledge. This may cause the facilitator additional work and stress. However, action-research does provide a means of responding to societal pressures on educators:

Recent pressures on teaching staff from students and government have caused a crisis in higher education... students have demanded that institutions adapt their curricula, teaching and assessment methods to the changing needs of society... funding bodies have demanded greater accountability and effectiveness in terms of costs, resources and the quality of teaching and research in higher education (Zuber-Skerritt, 1992, p. 4).

Such pressures must be recognised but, wherever possible, they should not be allowed to become constraints. Academics must maintain flexibility in responding to societal pressures. Adoption of the action-research methodology encourages the establishment of self-critical communities of people. It does not assist people to implement pre-designed fixed systems; it involves people remaining open to surprises and responsive to opportunities which they recognise from their everyday-research perspectives. It involves the examination of new practices to compare them with previous practices. Whatever current practice is adopted it must be subjected to ongoing critical assessment and to change when appropriate. We found that many of the students on the AOS course were appreciative of the class environment that developed:

The course... made me realise what it is like in the >real world= and has given me an idea of what my role in society will be... I have learnt about myself, and to be myself.

I really appreciated the structure of this course compared to other accounting classes. It encouraged learning through becoming proactive, and overall it has restored my faith that learning can be enjoyable.

This course... has taught me to question everything. Discussion is imperative. I have learnt that change is good, and the way things have always been done, status quo, is not always right just because it is accepted by the majority of people.

I thoroughly enjoyed the loose structure of this course and the empowering feeling that this course provided me with. Having a learning environment where students and lecturers are both partaking of a learning process is a change for the better.

Conclusion

This paper has championed the use of the action-research methodology in educational research. We hope that a growing adoption of action-research in educational research will help to change the educational *status quo* in our universities. We attempt to help our students to develop the abilities to promote changes in their classrooms, and subsequently in their places of employment. Establishing an action-research environment, which provides students with some control over classroom developments, gives the students opportunities to cultivate confidence in themselves. Action-research encourages individuals to challenge 'what is'. It is with the hope of encouraging such challenges that we prepared this paper.

References

- Altrichter, H., Kemmis, S., McTaggart, R. and Zuber-Skerritt, O. (1989). Defining, confining or refining action research? In O. Zuber-Skerritt (ed.) *Proceedings of the first world congress on action research*, Brisbane.
- Bartholomew, J. (1972). The teacher as researcher. *Hard Cheese* No. 1, Goldsmiths College, University of London.
- Bourdieu, P. (1984). *Distinction: A social critique of the judgement of taste*, translated by R. Nice. Cambridge: Harvard University Press.
- Carr, W. and Kemmis, S. (1986). *Becoming critical: Knowing through action research*. Victoria: Deakin University.
- Clifford, J. and Marcus, G. (Eds.). (1986). *Writing culture: The poetics and politics of ethnography*. Berkley: University of California Press.
- Elliot, J. (1982). Action-research: A framework for self-evaluation in schools. Working Paper No. 1. *Teacher-Pupil Interaction and the quality of learning*. London: Schools Council.
- Gibson, R. (1986). *Critical Theory and education*. London: Hodder and Stoughton.
- Greenwood, D.J., Whyte, W.F. and Harkavy, I. (1993). Participatory action-research as a process and as a goal. *Human Relations*, 46(2), 175-192.
- Habermas, J. (1984). *Theory of Communicative action: (Volume I)*. Cambridge: Polity Press. First published as *Theorie des Kommunikativen Handelns* (1981).
- Hines, R. (1988). Financial Accounting: In *Communicating Reality, we Construct Reality*. *Accounting, Organizations and Society*, 13(3), 251-262.
- Kember, D. and Kelly, M. (1993). *Improving teaching through action research*. Campbelltown: Higher Education Research and Development Society of Australasia.
- Kemmis S. and McTaggart, R. (1988). *The action research planner, 3rd edition*. Geelong: Deakin University Press.
- Ledford, G.E. and Mohran, S.A. (1993). Looking backward and forward at action research. *Human Relations*, 46(11), 1349-1365.
- Lewin, K. (1952). Group decisions and social change. In Swanson, G.E., Newcomb, T.M. and Hartley, F.E. (Eds). *Readings in social psychology*. New York: Holt.
- McKernan, J. (1991). *Curriculum action research*. London: Kogan Page.
- McNiff, J. (1988). *Action research - Principles and Practice*. Basingstoke: Macmillan.
- Mitroff, I.I. and Mason R.O., (1981). *Creating a dialectic social science*. Dordrecht: Reidel.
- Stenhouse, L. (1980). *Curriculum research and development*. Heinemann: London.
- Whyte, W.F. (1990). *Action-Participatory action research*. Sage: London.
- Zuber-Skerritt, O. (1992). *Professional development in higher education*. Kogan Page: London.