This paper is mainly written from the perspective of an action research practitioner. It is drawn primarily from my experience as a Senior Executive and HRM specialist, supplemented later by additional academic research and teaching.
Summary of my thesis to serve as a background to this paper

Management learning is a relatively new field that is of strategic importance to organisations facing rapid changes in their environment. Despite its importance, research methods in management learning are still not well established. There is also an increasing interest in studying how managers learn from situations in their work place.

Hence I decided to focus my research on management learning at my workplace. For my doctoral thesis, I carried out an action research study of management learning by intervening in a new engineering operation in a Japanese multinational company in Singapore.

At the start of the study I was the supervisor of young local managers who had to take on greater responsibilities rapidly to achieve the challenging objectives set by top management our operation in the organisation. To do this I had to help my managers to 'learn to learn' by using the challenges arising at the workplace to develop 'soft' management skills in addition to their 'hard' engineering skills to become more effective managers.

Traditionally, our hierarchical organisation did not follow a systematic method of introducing change. I wanted to use a more systematic method to introduce change in our operation, with the help of the very managers who would take ownership for this change. I felt that collaborative techniques, such as a search conference to reach common understanding, action learning for manager development and action research to study change could be used to introduce changes in my operation effectively.

Using a collaborative method also fitted in with my values that I had adopted from my international experience as an engineer and as a manager working in many parts of Asia and the Middle East. These experiences taught me that tolerance and understanding are very important in dealing with different cultures. I also had a tendency to stand up and speak of the rest of the organisation to the Japanese managers and was nicknamed 'opinion leader' in a friendly way by the management. Perhaps this came from my being brought up in India in my younger days where democratic principles are considered extremely important. My political heroes were democratic leaders - Jawaharlal Nehru and Abraham Lincoln. Although I was not a freedom fighter in India, as I was too young at that time, I was brought up among families who had made sacrifices during the Indian Independence movement. So empowerment was an important value to me.

After reviewing the relevant literature I hypothesised that helping my managers to 'consciously learn' from their work would lead to their development. I thought that 'action learning' could be introduced into my operation to study management learning, as it would appeal to my young managers, some of whom had taken up MBA programs taught by Western universities. As action learning resembled 'quality control circles' it would have no political obstacles to its promotion in a Japanese company. The Singapore Government was also encouraging the local people to adopt good Japanese practices like 'quality control circles' and this was catching on in local companies. So it also resonated with local theories of work improvement.

In my research I was able to expand an action research model proposed in the literature for post-graduate management research programs to embrace external cycles that were essential to answer my research questions. I was also able to incorporate action science techniques in the development of both myself and my managers in learning from situations that arose in the work place.
"The research question should drive the methodology... How often do we do the opposite? We take as a given whatever methodology we are comfortable with or skilled in using and then adjust our research questions to fit. And how many opportunities for learning we let pass by doing that" - J. Richard Hackman (1992)

Introduction

The thematic concern for my thesis was 'How to improve the practice of learning by local managers in my organisation using the opportunities arising at the work place?'

My primary research question was:

'Will developing 'conscious learning' among managers make them more effective managers?'

My secondary research questions were:

1. 'Can action research/learning concepts be successfully applied in an Asian context?'
2. 'Can a senior manager of my background, with international exposure and experience, be able to channel such knowledge to younger managers using participatory action research?'

Setting:

There were two reasons for choosing action research as my research methodology.

Firstly the phenomenon I was studying did not seem to fit traditional research methods as I was studying my managers in their natural settings.

Secondly I was interested to do something that I had not done before both for my personal knowledge and professional development.

The constraints I faced in my research situation were:

1. I had to use a small sample of engineering managers within my operation for the study.
2. It was difficult to isolate the sample in a controlled setting, as we could not afford to take the managers away from their work environment due to our workload.
3. I had to actively participate in the processes and could not stay away from the managers while the research was being conducted as it was carried out concurrently with their normal work.
4. It was difficult to set up measures to check the learning of the managers, and conclusions could only be made about this indirectly.

According to Denzin and Lincoln (1994), 'qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomenon in terms of the meanings people bring to them'. Swanson, Watkins and Marsick (1997: 92) state that qualitative research is most appropriate in human resource development for building new theory... and for exploring uncharted territory'. Casell and Symon (1994:7) state that 'qualitative research can be said to have a number of characteristics which include: a focus on interpretation rather than quantification; an emphasis on subjectivity rather than objectivity; flexibility in the process of conducting research; an orientation towards process

rather than outcome; a concern with context regarding behaviour and situation as inextricably
linked in forming experience; and finally, an explicit recognition of the impact of the research process on the research situation.'

I felt that qualitative research methods would suit my research better due to the following reasons:

1. I was limited by my organisational constraints to carry out the research in our natural setting - not in a controlled environment.

2. I also wanted to understand how to encourage managers to learn from situations in their own work place, for which I was not looking for a quantitative outcome.

3. I wanted some flexibility in conducting my research as our organisation was prone to frequent reorganisation, which was part of our head office culture.

Choosing action research

From the research methodologies that I explored, I chose action research as my methodology for this research due the following reasons:

Both the organisation and I, as a senior manager in the company, realised that we had to improve the practice of local manager development in the organisation. The setting up of a new business for my operation created the need for a major shift in the way we were doing our engineering work. The steps we had to take to move towards this new direction were not very clear. We felt that we had to use our collective knowledge in a collaborative way to take a step forward for the organisation. We also had to share both power and responsibility to achieve our new objectives. All these provided excellent opportunities for managers who were involved in 'learning-by-doing'. They were also good reasons for using an action research methodology.

Although I began with a specific plan for my research, I had to leave open the possibility of changing or adapting my research methodology to suit the situation. The 'emergent' character of action research provided this flexibility. I started with a 'fuzzy question' for which there were no clear answers in the beginning. The methods I decided to use were the best guesses I could make based on my initial literature review.

An action research model for the study

My whole study was an action research study that spanned two years. However, the entire research had many small cycles, each driving the next.

Initial action research model:

Initially I adapted the Perry and Zuber-Skerrit (1991: 76) model for a post-graduate action research study for my research. This model uses the concept of 'thesis action research' by the researcher and 'core action research projects' that are used in the organisation as the action phase of the 'thesis action research'. In my model, management learning was my 'thesis action research' and the problem that we tackled as managers during this research - new work model implementation - was our 'common core action research' project. Together, these formed the action research approach to my research.

Figure 1 shows this model.
As per this model, an action research project has the following elements

During the planning phase of the research a problem is formulated, including the research design and rationale. Literature survey is carried out to justify the research methodology. In the action phase, the action researcher works with a work group's thematic concern through planning, acting, observing and reflecting on management practices through the 'core action research' projects. During the observation phase of the 'thesis action research', the researcher is expected to describe clearly both the research and the procedure. He/she will then carry out an analysis and evaluation of the results of his actions, both content and process, in light of the literature survey. The reflection element of the thesis action research project would analyse the reflections gathered during the project. Prepositional conclusions would be formed from the thesis (for example, a new theoretical model). The thesis should also include knowledge claims and limitations and propose areas for further research.

Although I adapted this model to include external action research cycles I used the terms 'core action research project' and 'thesis action research project' to identify elements of my research following the definition of Perry and Zuber-Skerritt.
My final action research model

During this study, I also participated in two other 'learning sets' which had a significant impact on my research questions:

1. A learning set called the 'PhD Set', which frequently met face-to-face in Singapore. This set was formed between the PhD students doing their doctoral program through The University of South Australia supervised by Prof. Alan Davies and A. Prof. Bob Dick. The conclusions I derived from participating in this set helped me to answer my primary research question as well as my first secondary research question.

2. An electronic learning set called Elogue with whom I (later) set up a virtual consultancy for 'people development' using action technologies. This set was formed while attending an on-line action research course called AREOL (Action Research On-line) that was announced through the action research discussion list 'arlist'. Participating in this set helped me to find answers to my second secondary research question.

My final action research model including the interaction between my research set and the two external sets is shown in Figure 2.

![Diagram of action research model](image)

**Figure 2. Final Action Research Model**

The figure shows three intertwined cycles - individual (my research), participatory (with the PhD set) and external (with Elogue).

This revised model was arrived at for the following reasons:

My research actually included only one core action research project due to limitations of time and my research setting. The original research model also did not address my secondary research questions. I was able to draw conclusions about my secondary research questions from the external action research cycle through the PhD set and Elogue.

The individual cycle covers not only the thesis action research project, but also my own personal learning and transformation. The planning phase of the 'individual cycle' drove the action phase of the 'participatory cycle'. The reflection phase of the 'individual cycle' was carried out with members of the PhD set and Elogue. This led to changes in the planning phase of the 'individual cycle' which then acted on the action phase of the 'participatory cycle'. The symbols in my model
have been combined to show this effect.

Action learning:

I used action learning, which is closely related to action research, as the technique for involving my co-researchers in management learning activities in the work place. The principles of action learning also fitted in with the philosophy of 'quality circles' that was promoted in a Japanese company and had become popular in the Singapore society.

Search conferences:

As per Frank, Angus and Rehm (1992: 141) 'Search conferences have been linked with action research as the 'generative side' of action research to introduce social innovation and recognise system level, themes and trends.'

I used search conferences in my research to arrive at a 'shared vision' for my operation from which the theme for my 'core action research' project emerged. The momentum of the search conference was kept up by the 'action learning' program that took on the key projects resulting from the 'action items' that arose out of the search conference.

Action science:

As I approached the end of my study, I became an internal consultant for the organisation where I conducted this research. During this time I had occasions to evaluate my own performance as the previous director of the organisation based on my study of 'action science'. Like Pogo (Kelly 1996: http) I was surprised to realise that 'We have met the enemy and he is us'.

At this time I was also engaged in a 'reflective practitioner' mode with a manager in a one-to-one situation as I became his adviser but had to report to him in the organisational hierarchy. The balancing of these two roles resulted in personal lessons for me. Several times I caught myself advising him (which was my previous role as his superior) instead of encouraging him to take his own decisions.

On reflecting on these experiences I realised the value of adding action science to my management learning model. To help me to understand the usefulness of action science I carried out a detailed analysis of the 'power relationship' dilemma I faced during my research as a personal case study. This was done through reflecting on some of the conversations that took place at the action learning meetings using 'the left hand column' recording what I had in mind and 'the right hand column' recording what I said and investigating into any 'manipulation' on my part to influence the managers. As this was done towards the end of the research I regret that I have not used the power of 'action science' fully in my research. I would recommend that future researchers in this area should include more 'action science' elements in their research from the beginning.

Sample

I used a purposeful or criterion-based sampling for this study. According to Maxwell (1996:70) 'this is a strategy in which particular settings, persons or events are selected deliberately in order to provide information that cannot be obtained well from other choices'.

I had to investigate management learning among my managers. I was introducing western methods in a traditional Japanese company, which was steeped in Japanese practices. So when I started my action research and formed a learning set, I used managers in my operation, who had either completed or were in the process of completing MBA programs run by Western universities.
I needed these managers to initiate the program to reduce resistance and help me to get it going in the first place. As the research progressed, we added three more managers to the set who had not joined MBA programs but were core members of the new work model implementation committee. This was after we chose the new work model implementation as our core research project during our study. In the end, the learning set was evenly balanced between the two categories of managers.

Given my environment, larger samples and a more controlled environment were not possible without changing the very context I wished to conduct the research in. This in fact turned out not to be a problem by using action research as I was aiming towards achieving 'change' and 'understanding' with the very people who were being affected by the changes that were being introduced.

Data Collection

I collected data in various ways:

The main data were collected through the following:

1. Minutes of action learning set meetings, including reflections.
2. Reflective memos written by myself during the research.
3. Convergent interviews of the research set by independent action researchers from outside my organisation.
4. Feedback from the research set on what they had learnt.
5. Feedback on my conclusions from the research set.

Other data that were used to support my research were:

1. Company records of the work model implementation committee's work.
2. Company documents relevant to the research.
3. Videotape of an action learning workshop conducted by my co-researchers and myself at a public conference.
4. Reports of search conferences that were held during the study.
5. Review of work done by the new work model implementation committee by an operation manager who was not part of our learning set but who has succeeded me in my job in the operation where this study was mainly conducted.
6. Notes taken during the meeting with the PhD set.
7. Review of management outcomes of the PhD set and emails with them about their work.
8. Feedback from workshops conducted during the study with both the research set and PhD set.
10. Reflective memos that I wrote during an action research course that I attended through the University of Sydney.
11. Review of my thesis by an independent researcher doing his research on 'learning organisations'.

12. Personal case study of my 'power relationship' dilemma.

Data Analysis

For quite some time I was puzzled about how to analyse my data. I did not have a large amount of data and I had worked mainly with one group of managers in my organisation on one core action research project. While thinking about this dilemma I came across a book edited by Peter Frost and Ralph Staeblin called Doing Exemplary Research (Frost and Staeblin 1992).

In this book, Richard Hackman, commenting on the exemplary research conducted by Connie Gersick, states that 'one lesson we learn from this research is about the value of staying very close to the phenomenon one is studying, rather than do scholarly work at arm's length...the research question should drive the methodology.... Connie invented a unique research methodology specifically tailored to her particular research question' (Hackman 1992: 75).

After reading about Connie Gersick's 'exemplary research' and Hackman's comments on her research, I decided that I would use the data collected during our set meetings and the external events surrounding the study and look at it in different ways to make sense of the data. Therefore, my data analysis used multiple methods of analysis. It used several ways of looking at my data, but in each instance I carried out the analysis to sufficient depth to bring to the surface the answers relevant to my research questions. Thus I had, like Gersick, stayed close to my phenomenon and formulated a research (analysis) methodology that was tailored to my particular research questions. I am not saying that results could not have been obtained otherwise, but what I did suited my purpose and worked well within the environmental constraints I faced in doing my research.

My idea was to analyse the data from a "helicopter view" and go deeper and deeper into them to uncover more findings at each iteration. Each iteration drove the next one like an action research spiral in itself. My data analysis methods are based on the methods suggested by Chenitz and Swanson (1986), Miles and Huberman (1994) and Bob Dick (1990, 1990a, 1993).

As this research was also conducted for academic accreditation most of my analysis of data was a private analysis of data as this had to be my original contribution. However in action research the co-researchers should also participate in analysing the data. This was achieved through confirming the minutes of the action learning meetings with the co-researchers and getting feedback from the co-researchers on the analysis and incorporating their comments into my analysis.

Figure 3 shows the different levels of data analysis that I have carried out with my data.
Rigour

I attempted to address the question of rigour by checking the validity of my findings from the following perspectives:

1. Qualitative research.
2. Action research.

In addition to this I carried out the following checks on my research:

1. Quality assurance checks
2. Addressing ethical issues

Research questions vs. methods

The relationship between my research questions and the methods that I used to answer the questions are as follows:

Primary research question:

Will developing 'conscious learning' among managers make them more effective managers?

Methods used to answer primary research question:

1. Forming an action learning set with my managers.
2. Recording and analysing minutes of action learning meetings.
3. Charting progress of managers in research set in the organisation.
4. Comparing learning outcomes of research set with the management outcomes of the PhD set.

5. Comparing my findings with the research set with cases from the literature.

6. Convergent interviewing of managers of the 'research set'.

Secondary research question 1:

Can action research/learning concepts be applied successfully in an Asian context?

Methods used to answer secondary research question 1:

1. Checking any rejection of concepts by both the 'research set' and the PhD set.
2. Checking the environment in Singapore
3. Checking the feedback received through making the knowledge about the research public

Secondary research question 2:

Can a senior manager of my background with international exposure and experience, be able to channel such knowledge to younger managers using participatory action research?

Methods used to answer secondary research question 2:

1. Interactions between Elogue and research set.
2. Reflections on personal learning through the research.
3. Forwarded emails from the Internet to the 'research set'.

Assumptions

The first assumption that I have made in choosing a methodology is that my research should be useful to practice. Action Research methodology provides the interplay between 'theory' and 'practice'.

The second assumption I have made is that whatever research was to be carried out should have practical implications. Therefore testing of 'actions' and adjustments to actions based on results was expected. The cyclical approach of action research and action learning where you shuttle between action and reflection had to be part of my methodology.

Conclusions (about the use of my methodology)

The research methodology used in my thesis was in line with a methodology suggested by Chad Perry and Zuber-Skerritt for carrying out action research in graduate management research programs. The Perry and Zuber-Skerritt (1991:76) model suggests that a PhD core action research project would need to progress through at least two or three cycles to uncover a distinct contribution to knowledge. I had five larger action research cycles in my core research project. This was further enhanced by my research cycles with the PhD set and Eilogue that also contributed to the depth required of a doctoral research thesis.

While the Perry and Zuber-Skerritt model became the basis of my research methodology, I had to modify it to take care of the influence of external elements such as my work with the PhD set
and Elogue. So my model was changed to incorporate this enhancement. This also helped in 'triangulating' my findings.

In any research conducted at the workplace, especially when the researcher happens to be someone with power, the power relationship between the researchers and informants or co-researchers may affect the quality of the research. However if the research is associated with the introduction of change the power relationship can actually be useful in supporting the change that may have been arrived at in an objective manner. Managers conducting research in their own organisations will often be caught in this dilemma. I could not find an answer to this issue until I understood the contribution of Argyris and Schon (1974: 41) to organisational inquiry. This contributed to adding an 'action science' component to my research model. As this came as an afterthought in my research situation I feel that more thought should go into how to combine 'action sciences' with 'action research and action learning' to the Perry and Zuber-Skerritt (1991) model used as a basis for this research.

Outcomes (from the research)

As this is a paper about 'methodology' I have only summarised the outcomes from my research and not explained them in detail. The details about how I arrived at these outcomes are available in my research thesis. (Sankaran 1997)

The outcomes were divided into 'management', 'research' and 'personal' outcomes. Each type of income was further classified into 'direct', indirect' and 'surprise' outcomes.

Management outcomes:

Direct:

1. The new work model was well established.

2. Managers who participated in the research set took on higher responsibilities even after I was not the head of the engineering operation any more.

Indirect:

The engineering operation met all its goals by increasing its income by 2.5 times, while halving the cost and maintaining the same number of staff in Singapore.

Surprise:

1. The 'learning set' faded as new management philosophies were adopted in the company.

2. I had not thought about using the PhD set (made up of local managers) to compare with my findings with local managers of the research set. (I eventually did this when it was pointed out to me by my supervisors)

Research Outcomes:

Direct:

1. Established criteria for management learning at the workplace.

2. Management learning led to more effective managers.

3. Surprise is a trigger for management learning

4. Many practitioners around the world found the action learning guide that we designed to be
very useful.

5. Action learning and action research contributed to the researchers of the research set to be more effective managers.

Indirect:

1. Action learning and action research can be applied in an Asian culture with local adjustments.
2. Camouflaging is effective in introducing change management processes.
3. Transfer of learning is feasible through 'participatory' action research.

Personal outcomes:

Direct:

1. Smooth transition into another career.
2. Became a reflective practitioner.

Indirect:

1. Learnt new skills for my own business.
2. Won recognition in the International community as an action learner.
3. Learnt electronic facilitation skills.
4. Was able to publish about some of my activities in a book written by Professor Mike Marquardt.

Surprise:

1. My own weaknesses as a manager were exposed.
2. Learnt how to analyse dilemmas using 'action science'

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