

Research Methodologies

*I am a part of all that I have met;
Yet all experience is an arch wherethro'
Gleams the untravell'd world, whose margin fades
For ever and for ever when I move.*

— Alfred Lord Tennyson, 'Ulysses'

2.1 Introduction

This article is part of a series on Organisational Change and Reflective practice, it illustrates and draws on over 12 months work as an action learning practitioner and has been condensed and summarised from the authors thesis- Titled- 'The value of reflective practise in the process of change'. Additional information can be sourced from the web. www.metanoa.com.au.

This article gives a broad overview on research methodologies and reviews the literature on action research/action learning. Attempt is also made to integrate the 'Tao' with action research, based on the authors understanding.

2.2 What Is Research?

Research is a method of inquiry. One method of inquiry favoured by many in science is often referred to as *logical-positivism* or the '*hypothetico-deductive approach*'. I have discussed some of the limitations of this approach in the previous chapter on Philosophy and Science.

Another major method of inquiry is *phenomenological*—this adopts a more qualitative and naturalistic approach to understanding the contextual settings of human behaviour (Patton, 1991).

Whilst logical-positivism relies on a deductive schema based on hypothesis testing—and as some would argue, manipulation of the research context—phenomenological inquiry encourages researchers to be part of the process, and to immerse themselves within the complexity of the intervention. Consequently, it is more suited to research dealing with social contexts, and where the outcome is change, rather than purely data.

More meaningful results can be expected to be gained by adopting the phenomenological inquiry approach, and in particular action research when dealing with organisational change.

2.3 Phenomenological Research Methodologies

There are many research methodologies. Patton (1990) outlines five of them:

1. basic research to contribute to fundamental knowledge and theory;
2. applied research to illuminate a social concern;
3. summative evaluation to determine program effectiveness;
4. formative evaluation to improve a program; and
5. action research to solve a specific problem

(Patton, 1991:150)

Elden outlines three approaches to phenomenological research and their relationship to employee involvement.

Table 2.1- Approaches to Research

	Basic Research	Applied Research	Participative Research
Research goal	Abstract general knowledge (context-free knowledge)	Solutions to workplace problems (context-bound knowledge)	Local theory-actionable & generalisable (context bound knowledge)
Who learns from the research in the first instance	The social science community (usually but not exclusively other researchers)	The client (usually but not exclusively management)	Participants (usually not exclusively workers and researchers)
Likelihood that those who supply the data will use the results	Very low	Low	High
Relation between researcher and Researchers	Theoretician Object	Expert Client	Colleague Colleague
Researcher role	Producer of distant learning	Producer of organisational change	Co-producer of learning

Elden (1981:263)

The preferred approach for an action learning intervention is the *participative* research methodology. It provides more applicable and relevant context—bound knowledge with the added benefit of high involvement, promoting ownership by all those involved.

Whilst the *participative* approach was the attempted ideal in the fieldwork, in reality, (applying Elden's model) the approach fluctuated between *applied* and *participative* research. For reasons explained in later articles there was tension between the tendency of the client to view the author as an expert and 'oracle' and the authors preference for being a co-researcher and colleague. As an external consultant to the organisation the 'expert' tag unfortunately came with the territory.

A camel is stronger than a man; an elephant is larger; a lion has greater valour; cattle can eat more than man; birds are more virile. Man was made for the purpose of learning.

—*El Ghazali in Shah, 1968: 62*

2.4 Action Research

There are many differing approaches to action research and as such there is no one definitive description. Following is an attempt to give an overview of some of the various definitions and approaches

The idea of action research first appeared in the writings of Collier (1945). The term was then conceptualised by Lewin (1952) and Corey (1953) and was further developed by Kolb (1984) and Carr and Kemmis (1986). Other more recent proponents include Winter (1987), Zuber-Skerrit (1992), McTaggart (1991), Bunning (1992) and Dick (1993).

One of the simplest but most elegant descriptions comes from Dick:

Action research is a methodology which has the dual aims of action and research...

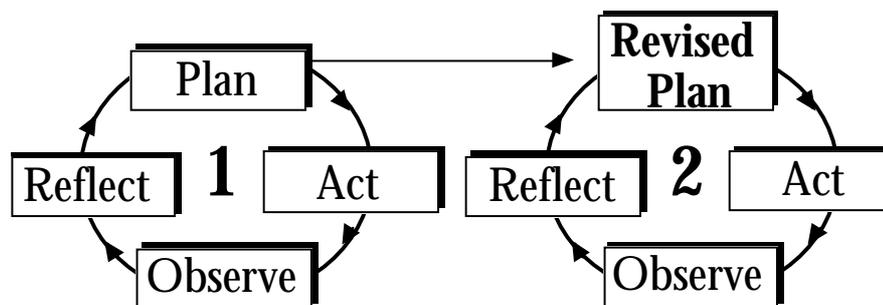
action ~ to bring about change in some community or organisation or program

research ~ to increase understanding on the part of the researcher or the client, or both (and often some wider community)

(Dick, 1992:2)

Action Research draws on a more holistic paradigm than traditional research methods. There is a spiral of cycles incorporating four major interrelated phases: planning, acting, observing and reflecting (as outlined in Figure 2.1). This makes the process cyclical, unlike traditional scientific enquiry which is linear.

Figure 2.1- Action Research Cycle



According to McTaggart:

Participatory action research starts small and develops through the self-reflective spiral: a spiral of cycles of planning, acting, (implementing plans), observing (systematically), reflecting and then re-planning, further implementation, observing and reflecting. The collective plays an important role in deciding where the group and individuals may exert their efforts most effectively. In turn, the collective reflects on observations made about action taken so far and uses this reflective activity to inform decisions about future action steps of the group and of individuals.

(McTaggart, 1991:175)

There are many descriptions of the attributes of action research. In 1991 Altrichter *et al.* outlined what has since become a standard definition of this form of research:

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 participants but also to other persons interested in and concerned about the work and the situation *i.e.* their (public) theories and practices of the work and the situation

and if yours is a situation in which there is increasingly

Data-gathering by participants themselves (or with the help of others) in relation to their own questions

Participation (in problem-posing and in answering question) 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, replanning, *etc.*

Reflection which supports the idea of the ‘(self)-reflective practitioner’

then yours is a situation in which ACTION RESEARCH is occurring.

Altricher *et al.* (1991:8)

In more general terms Zuber-Skerritt writes:

Action research has been defined in many different ways. I have described it as collaborative, critical (and self-critical) enquiry by reflective practitioners who are accountable and make the results of their enquiry public. They evaluate their own practice and engage in participative problem-solving and continuing professional development.

(Zuber-Skerritt, 1992:47)

The key factors here are that the process be documented, that those involved work together to explore and attempt to solve the problem, and that they collectively reflect on and examine the process on an ongoing basis. There is no formula to follow—the path is defined *in situ*. In fact, a key factor of action research is that it involves the people experiencing the process. McTaggart describes it as:

...the way groups of people can organise the conditions under which they can learn from their own experiences and make this experience accessible to others.

(McTaggart, 1991:170)

And Carr and Kemmis:

Action research is a process of experiential learning where knowledge is created through the transformation of experience.

(Carr and Kemmis in Harker, 1991:111)

Given that the action research process is an evolving one, working as it does with real life situations, it does not start with a clear question. As Zuber-Skerritt explains, action research:

...differs from traditional experimental research in that it is intended to yield not only information, but also action and practical improvement. It does not begin with a clear question or hypothesis which requires a yes/no answer and must be replicable, as is the case in experimental research; instead, action research begins with a vague question which is only gradually clarified and requires a complex answer depending on the situation and the people involved.

(Zuber-Skerritt, 1993:55)

In fact, the inexactness of the basic or central question is one of the defining characteristics of action research—as well as being the aspect that traditional researchers have the most difficulty with.

The changing nature of the central question, and its evolution from its early forms, are described by Dick:

Conventional research works best when you can start with a very precise research question. You can then design a study to answer that question, also with precision.

In action research your initial research question is likely to be fuzzy. This is mainly because of the nature of social systems. It is also because you are more likely to achieve your action outcomes if you take the needs and wishes of your clients into account. Your methodology will be fuzzy too. After all, it derives from the research question, which is fuzzy, and the situation, which is partly unknown.

...Provided that the fuzzy answer allows you to refine both question and methods, you eventually converge towards precision. It is the spiral process which allows both responsiveness and rigour at the same time.

(Dick, 1993:12)

However, given the apparent looseness of this approach, Dick emphasises the need for rigour:

At all times collect and interpret your data in defensible ways. In particular, know your overall methodology before you begin. At least, know how you intend to start, and check that it is defensible. You will change your mind about your methodology in the light of your experience.

(Dick, 1993:9)

Nonetheless, 'rigour' does not mean 'rigor mortis'. The action researchers must remain flexible and responsive. Dick again:

If you are to be adequately responsive to the situation, you can't begin the exercise with a precise question. The question arises from the study. ...As it happens, one of the key principles of action research is: let the data decide.

(Dick, 1993:13)

However, as this is still research, there must be some theory that is being tested, even if its precise definition evolves over time. This is the basic premise, or central question, which is explored, evaluated, revised where necessary, and put to the test again.

Once again, Dick is a valuable source of advice in terms of testing a theory:

There are many ways in which you can use the similarities and differences between data sources to increase the accuracy of your information.

...This might be called dialectic. It is similar to what is often called triangulation in research.

...Any two or more sources of information can serve your purpose of creating a dialectic. Here are a few examples. You may use ...

- different informants, or different but equivalent samples of informants;
- different research settings (as a bonus, this increases the generalisability of your results);
- the same informant responding to different questions which address the same topic from somewhat different directions;
- information collected at different times;
- different researchers;
- or, as in triangulation, different methods.

(Dick, 1992:13)

Data collection in action research is not entirely straightforward, as very little of the data may be quantitative. Documentation is more likely to be based on interpretation of records and observations, or a reporting of feedback. Thus the variety of methods recommended by Dick, where 'data' is sourced in more than one way, and hence likely to be more reliable. The goal is to be objectively subjective.

Based on a review of the literature, the benefits of using Action Research are summarised below. These points are taken from the authors Winter (1989); Zuber-Skerritt (1993); Bennett (1988); Jain (1991), Schon (1983) Dick (1992); and Bunning (1993).

Action research has the potential to be the most effective way of managing change within an organisation:

The learning process has longer term and wider application in that self-limiting patterns can be broken through (double-loop or generative learning).

Action research is more suited to the soft system of management and organisations.

The social context and conditions in which the research takes place can improve.

Action research provides practical, applicable solutions.

The solutions are generated from within, not imposed from without.

The people needing change are the ones that are involved in making it happen and so own the process and outcome more completely.

The process is emancipatory, where all can contribute on a fairly equal basis.

Action research is highly flexible, adapting itself to the specific (even changing) needs of the specific organisation.

Because the research is grounded in practice, the process can more usefully be taken up and applied by others (real contribution to public knowledge).

The practitioner has the potential for increasing conscious learning that has wider application.

The outcomes expected of action research are defined more precisely by Kemmis and McTaggart (1988):

In action research we look for changes in three different aspects in individual work and the culture of groups: changes in the use of language and discourses—the actual ways that people identify and

describe their world and work; changes in activities and practices—what people are actually doing in their work and learning and changes in social relationships and organisation—the ways people interrelate and the ways their relationships are structured and organised within the organisation.

(Kemmis and McTaggart, 1988:16)

This again shows a clear difference between traditional research and the action research approach: results occur along the way and are immediately applied or incorporated—they are not merely documented for some future use or indeed for filing.

However, in the process of carrying out the research to attain these results, it must be borne in mind that the researcher is dealing with a real life situation. He or she must gain rapport with the group and/or organisation being worked with, and maintain an ethical standard, both in carrying out the research, and in writing it up for public scrutiny.

Action researchers may pay attention to the ethical principles that guide their work. Their actions are deeply embedded in an existing social organisation, and the failure to work within the general procedures of that organisation may not only jeopardise the process of improvement but also existing valuable work.

(Winter, 1987:87)

2.5 Characteristics of Action Research

Aside from the general understanding of what is meant by action research, some authors have attempted to break down the process and evaluate it in terms of its different modes of application or manifestation. Peters and Robinson (1984) utilise the terms 'strong and weak', where both have the characteristics of:

1. Involvement in change (problem focused with a social improvement agenda)
2. Organic processes (cyclical or iterative stages of fact finding, reflection and planning, strategic action and evaluation)
3. Collaboration (research is carried out as a joint, co-operative endeavour amongst participants)

(Peters and Robinson, 1984:532)

The strong form is distinguished by focusing on a more emancipatory process through working with individuals' and groups' values and beliefs. The strong form can lead to double loop learning and challenges the current constructs and paradigms that individuals hold.

The weak form on the other hand is more focused on solving problems and usually only exerts change within the construct of the same paradigm. Israel (1992) argues that this form is used often in Organisational Development.

Carr and Kemmis (1986) split action research into *technical*, *practical* and *emancipatory* (see Table 2.2) Within this context *technical* and *practical* fall within the weak form and *emancipatory* within the strong form. They argue that the only true form of action research is *emancipatory*.

Table 2.2 Types of Action Research

Action Research Type	Aims	Role	Role Relationship
1. Technical	<ul style="list-style-type: none"> Effectiveness/Efficiency of educational practise Professional practise 	outside expert	co-option (of participants who depend on facilitator)
2. Practical	<ul style="list-style-type: none"> as (1) above practitioners understanding transformation of their consciousness 	Socratic role, encouraging participation and self-reflection	co-operation (process-consultancy)
3. Emancipatory	<ul style="list-style-type: none"> as (2) above participants's emancipation from the dictates of self-deception, coercion their critique of bureaucratic systematisation transformation of the organisation and of the educational system 	process moderator (responsibility shared equally by participants)	collaboration

Carr and Kemmis (1986:87)

2.6 Reflective Practice

An integral part of action research is the process of reflection, which is not a readily quantifiable parameter—occurring as an ongoing part of the overall process, rather than as an isolated and testable event.

Initially, the learner needs to understand what reflection is, probably via explanations and examples provided by the promoter of learning. Next step is for the learner to identify reflection processes within her or himself, at the same time that content is being dealt with. This involves a second level, or meta-process. Verbalisation and discussion of reflection processes as they are identified will help to clarify them, and may lead to suggestions for improvement. Conscious practice and skill development can then follow, until reflection is an automatic activity, consciously controlled and directed towards purposes chosen by the learner.

(Smith, 1991:17)

Reflection can also be facilitated via dyadic or small group interaction. Processes of particular use here include:

- highly developed listening to the ideas and feelings of others
- open rather than closed responses to the ideas and feelings of others
- willingness to share ideas and feelings with others
- constructive confrontation of differences in ideas and feelings
- creative idea generation (*e.g.* brainstorming)

(Smith, 1991:17)

Mezirow (1991) describes reflection as:

... the process of critically assessing:

- the content
- the process
- the premise(s)

of our efforts to interpret and give meaning to an experience.

(Bunning, 1995:1)

It is less frequently necessary for us to re-examine and challenge our presuppositions and our premises than to critique content or our process strategies. But it is premise reflection that opens the possibility for perspective transformation.

Action Learning

Action learning is a more holistic and emergent paradigm of learning it integrates the learning equation

$$L = \frac{P + Q}{R}$$

where L is learning which is the accumulation of knowledge, P = programmed knowledge, Q = knowledge gained by questioning self or others in conditions of chaos and in the absence of a definitive answer and R our own resistant to try something new or the systems inclination for entropy.

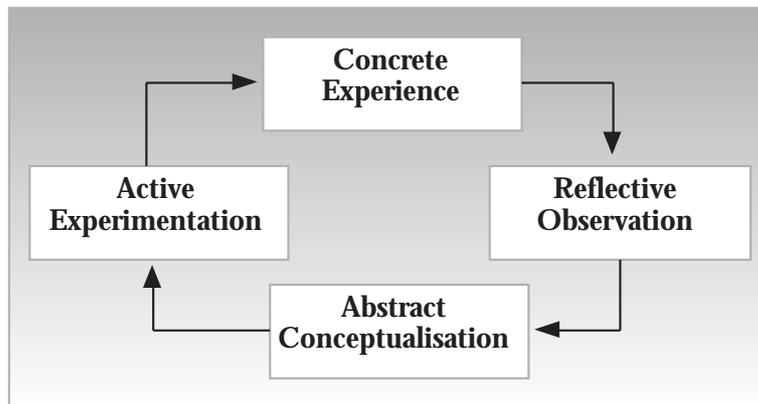
'P' or programmed knowledge, has often been peddled for its own sake—it is espoused by text books, experts, university/TAFE programs, *etc.* However, by itself, and contrary to popular belief, it does not necessarily equate to learning. Using established theory or another's insights as a basis for continued learning can be a powerful starting point, however there is inherent danger in taking on P at face value and not testing its relevance to your own situation at an appropriate time.

'P' may have been valued because it fits neatly within the logico-positivistic paradigm—it tends to be quantified and available, and is determinate and output-focused. It also comfortably moves learning incrementally within the same paradigm. It survives because it fosters single loop learning which satisfies our preference for exploring from a base of safety. It is generally not until 'Q' is incorporated into the equation that learning becomes double-loop.

'Q' is questioning insight, a vital commodity in these times of exponential change. Nonetheless, it is all too frequently overlooked by individuals and organisations, mainly due to pressure to produce, be busy, protect one's back, and the focus on immediate tasks in the short term. The time and 'safe space' to be open, non-defensive, take risks, and challenge views or actions, is just not there.

According to Kolb, there are four basic phases in the learning process (Figure 2.2). Once an experience has occurred, the person reflects on the message of that event, translates his or her reflections into general concepts which can be applied to future situations, then begins to actively experiment with these concepts.

Figure 2.2 Kolb's phases of learning

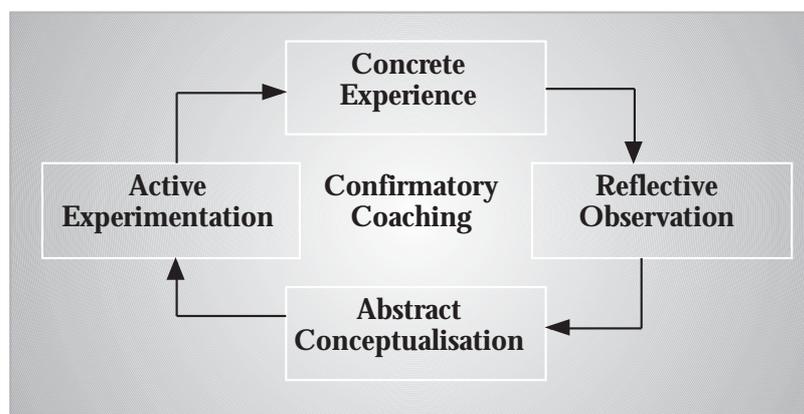


(Kolb, 1984:36)

Walter and Marks (1981) argue that experiential learning is operative only when participants are fully involved, when the lessons are clearly relevant to the participants, when individuals develop a sense of responsibility for their own learning, and when the learning environment is flexible and responsive to the participants' immediate needs.

Sleigh (1993) suggests that there is a fifth element to Kolb's model, which is an extension of the other four: Confirmatory Coaching—the best way to learn anything is to show someone else. Learning by Confirmatory Coaching relies on having gained the information first, in the other four modes. (See Figure 2.3)

Figure 2.3 Sleigh's extension of Kolb's learning model



Action learning asks the action takers to focus on their own live experiences rather than dissecting contrived issues. According to Bunning:

Action learning is an activity by which people learn with and from each other as they attempt to identify and then implement solutions to their problems or development issues.

(Bunning, 1991:2)

Action learning is a continuous process of learning and reflection, supported by colleagues, with an intention of getting things done. Through action learning individuals learn with and from each other by working on real problems and reflecting on their own experiences. The process helps us to take an active stance towards life and helps to overcome the tendency to think, feel and be passive towards the pressures of life.

Action learning is based on the relationship between reflection and action. We all learn through experience by thinking through past events, seeking ideas that make sense of the event and help us to find new ways of behaving in similar situations in the future.

(McGill and Beaty, 1992:71)

Another way of looking at the overall model of the action learning process is:

1. the action taker (who in this project is me)
2. the focus of action (as a co-researcher in the activities)
3. the action context (my reflections and learnings)

Action learning differs from the kind of group discussion which occurs on management training courses, where even if real problems are discussed, they are discussed only because the program exists—not because the problems have brought about the program. It is also different from experiential processes like business games and outdoor training, which focus on issues through simulation rather than real time reality. Action learning requires that the action takers deal with their own real life experiences, rather than dissecting contrived ones.

Any process that does this is likely to be more effective and have wider reaching effects.

My perception of action learning is that it is a process which enables individuals to make connections—connections within themselves; connections between themselves and their groups; connections between themselves and their homes and working communities; connections between themselves and the world.

Because the connections are personal, learning is always personally relevant as opposed to didactic learning which is often personally irrelevant. Relevant learning is quality learning.

An understanding of the interconnectedness and interrelatedness of all things is associated with the holistic way of viewing the world. The holistic view is an ecological view which leads to an understanding of people as a part of (as opposed to apart from) the environment.

(Shirley Ali Khan in McGill and Beaty, 1992:225)

2.8 Action Research and the Tao

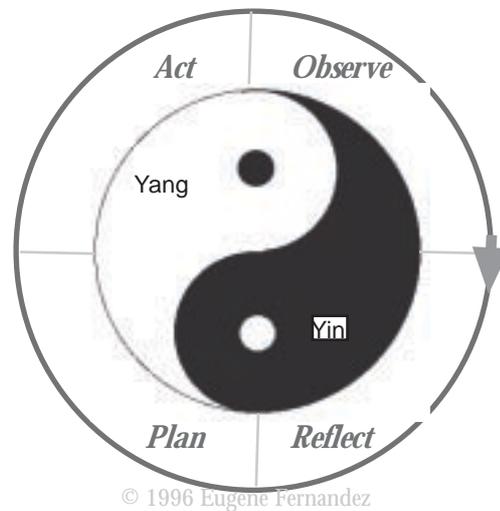
Action research and the Tao have clear parallels. Both emphasise cyclical processes, and both value the role of the individual—so we are not neutral bystanders in the scheme of life, but rather every action we embark on influences the outcome, and we ourselves are influenced as well.

Action research and Yin-Yang are ongoing, living processes. An arbitrary end point may be described, but the experiences of the past will evolve into and continue to influence the future.

The Yin-Yang model elegantly describes the cyclical process of plan-act-observe-reflect. The symbol, shown below, is divided into two moieties:

YANG	YIN
male	female
active	passive
dynamic	receptive

Figure 2.4 Parallels between the Taoist and Action research models



The strongest yang force corresponds to the most dynamic phase of the Action Research cycle: *action*. At the opposite end is strong yin, the most passive phase: *reflection*. There are two linking phases between these, where the Tao would argue that there is an inexorable movement away from extremes—resulting in a more balanced state. *Observation* is the natural progression from action, whilst *planning* evolves from reflection.

Each phase contains both yin and yang in varying degrees and directions of movement. As each phase moves into the next, it is informed by the previous one:

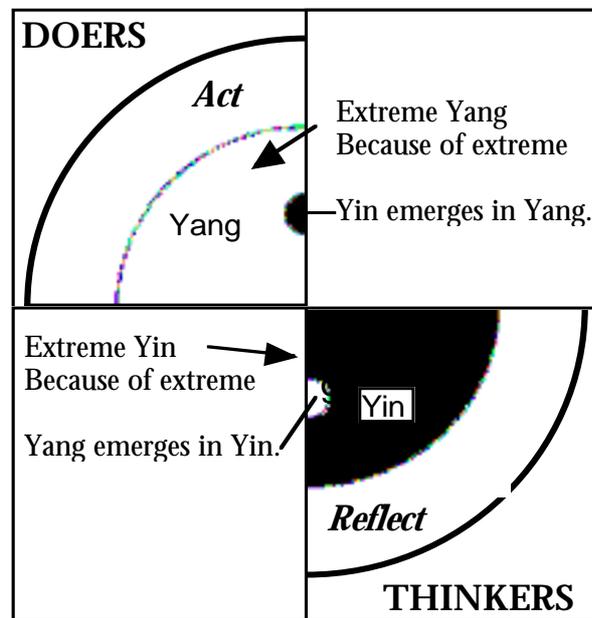
- Action:** Action is carried out based on previous planning.
- Observation:** In order to learn from what has occurred, we must first *know* what has occurred. *i.e.* we must make *observations* about the action.
- Reflection:** Reflection takes these observations a step further. It extrapolates, and makes generalisations and connections. It is here that real learning takes place, metanaos can occur, and wisdom is born. If this step is done well, the next round of the cycle will operate at a higher, much more informed level.
- Planning:** Planning draws on the wisdom and insights generated by reflection, in order to determine the course of the next action and make it as effective as possible.

The Eastern belief is that whenever there is too much emphasis on either yin or yang, its counter force emerges from within it and moves us naturally towards its opposite, thus restoring balance. If this natural cycle is not allowed to proceed, imbalance occurs.

An overemphasis on, or indeed limited use of, action or reflection is unbalanced and can lead to discontinuity, producing results that lack fullness and hence have limited validity or applicability. The Western overreliance in the past on reductionist approaches is an example of this.

For example, two extreme situations are shown below:

Figure 2.5 Dichotomy between yang 'doers' and yin 'thinkers'



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If the 'doers' do not put sufficient energy into thinking about their actions, they will be destined to repeat them over and over, with only minor, if any, improvements in efficiency and performance.

On the other hand, thinkers can ponder *ad infinitum*, constructing wonderful mental models that nonetheless have no influence on the world (unless taken up by a doer, of course).

Any truly effective process draws on and values each phase.

The yin-yang model is a simple and elegant visual representation of the process of movement through these phases, as well as the importance of both action and thinking occurring in balance and appropriate order.

It could be argued that the most effective action research process is one where each phase is adequately visited. However, if a key phase were to be identified for dealing with the problems faced by today's industrial society, it could be argued that the yin, or passive phase, would be the one. Indeed, contemporary authors referring to the Tao point to our overreliance on the yang process, which suggest that to achieve balance we need to make greater use of the more feminine, 'passive' processes.

If analysis of whatever action has been carried out is done cursorily, either through preference for the more active phases, or inexperience, then the next cycle will not be as advanced or well-informed as it could be. Thus the degree of change between one cycle and the next will be incremental, rather than quantum.

The degree of this shift, between one round of learning and the next, hinges to a large degree on the wisdom gained through reflection based on careful observation. Such reflection can lead to generative and deep change.

Thus the key to successful action research could be considered to be reflection so if the research is not progressing as well as its facilitator might have hoped, the solution may well lie in placing greater emphasis on this step.

It could be argued that this step is one that is traditionally undervalued or glossed over by the pressures of day to day business. The authors action research thesis however would argue that more reflective practice could be a key factor in effective organisational change.

*However much you study, you cannot know without action.
A donkey laden with books is neither an intellectual nor a wise
man.
Empty of essence, what learning has he—
Whether upon him is firewood or book?*
Saadi of Shiraz in Shah, 1968:96

*True end is not in the
reaching of the limit,*

*but in a completion
which is limitless*

—Rabindranath Tagore



About the Author

Eugene Fernandez - Biography

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Eugene Fernandez is currently a Program Director for Melbourne Business School- Mount Eliza Centre For Executive Education, where he designs and facilitates programs for corporate clients. Prior to this he was a managing partner of Metanoa a management consulting business for over 12 years , he previously also held various management roles (over 10years) in human resources and organisational development.

He has consulted to various industries in Australia and overseas. Participants from over 3000 organisations have also participated in his public management and leadership programs.

He has special interest and skills in developing and implementing integrated business planning, performance management, leadership development and change management processes. He has designed and facilitated leadership programs for both senior and middle managers in numerous organisations. Blending current theory with practice through his continued learning and understanding of the field of Action Science.

Eugene has lectured at the Australian Graduate school of Management, The Sydney Institute of Technology, The International Management Centers Association (UK), The Institute of Administration (Sydney) The Royal Institute of Public Administration and The Australian Institute of Management.

He holds a Master of Philosophy majoring in Organisational Change & Strategy with distinction and various other qualifications in Human resources and business.

Notes

