ALAR

Action learning and action research journal

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ALARA's vision is that action learning and action research will be widely used and publicly shared by individuals and groups creating local and global change for the achievement of a more equitable, just, joyful, productive, peaceful and sustainable society.

CONTENTS

Editorial

With almost 300 practitioners visiting Melbourne from all over the globe, the 8th World Congress Participatory Action Research and Action Learning, was a wonderful success! The Congress theme, *Appreciating our Pasts, Comprehending our Presents, Prefiguring our Futures*, echoes through the daily work of (P)AR and AL practitioners and this edition is no exception. It reflects the converging pasts, presents and futures. New writer, Keith Davis, describes a Sustainability Skills training program in its infancy using an action learning framework. Emerging researcher, Cathryn Lloyd, shares with us a snapshot of her research journey through an interpretive reflective framework, using an arts based inquiry approach. Riripeti Reedy presents a reflective commentary on a project in which she has been involved, "from the trenches". These works sit alongside the well-known names of Boon Hou Tay and Stewart Hase, who present a philosophical piece describing lemmas for Action Research. So too, Vicki Vaartjes brings together her practice with some reflections on Action Learning theory in her series of short case studies of organisations with whom she has worked.

The contexts in which all these practitioners write and undertake their work span our social fabric; government, business, community, women, intercultural projects, postgraduate education, and do so through arguably pragmatic means as well as critically reflective commentary. The Congress theme too encapsulates the AR and AL cycles we carry out in our work. We appreciate. We comprehend. We Prefigure. All for the next cycle.

Lemmas for Action Research

Boon Hou Tay and Stewart Hase

This paper describes a set of propositions or lemmas that may provide a useful ontological and epistemological underpinning for action research.

Introduction

According to the Oxford Dictionary (2010) a lemma, as intended here, is a mathematical term meaning, 'a subsidiary or intermediate theorem in an argument or proof'. It is taken via Latin from the Greek *lēmma* or 'something assumed'. The purpose of this paper is to describe seven lemmas that we suggest underpin action research theory and practice.

One of the questions we often get from new students of action research, particularly those undertaking a research program in a university, is where action research fits in terms of ontology. This is not a question that comes from a need for some sort of philosophical closure. Rather, it has more practical implications and arises while the student is thinking about the sorts of methods they might use to collect data. The idea of emergence and that the fluidity in the choice of method, often being dependent on previous data received rather than an epistemological preference, can be challenging. This is particularly true where students come from disciplines that have a strong methodological bias such as experimental research or critical theory, for example.

Head scratching about the ontological underpinnings of

action research is not confined to students. Scholars too have grappled with locating action research in the ontological and epistemological spectrum (e.g. Argyris 1980, Aguinis 1993, Dick 2002, Elden & Chisholm 1993, Hope & Waterman 2003, Kemmis 2001, Johansson & Lindhult 2008, Reason 2006, Reason & Bradbury 2001, Sandford 1970, Wilson 2004). Cassells and Johnson (2006) in a review of methods used by action researchers point out the ontological contradictions that exist for action researchers due to the wide range of methods used. For others (e.g. Bradbury & Reason 2002) it is a question of ensuring that the methodological choices made by the researcher are transparent and rigorous. This issue of rigor was recently raised in a paper by Kock, Gallivan, Michael and DeLuca (2008) who suggest that the struggle to find an ontological home for action research continues, at least in North America. The authors argue that acceptance of action research by the mainstream research establishment is dependent on arguing for ontological and epistemological legitimacy.

What is clear from the thinking of scholars and students alike is that action research is unique from an ontological and epistemological point of view. This lead to us thinking about whether there is a set of common assumptions that might underpin action research and overcome the apparent ontological contradictions. Thus, we have identified seven lemmas, which are described below. These have been derived from our long association with doing action research, teaching others, the literature and supervising PhD students undertaking action research projects. Mostly they have come from trying to resolve the dilemma stimulated by our students. These lemmas are intended as a starting point for further exploration and are certainly not presented with any conclusion in mind.

The seven Lemmas are:

- Action research is a meta-methodology.
- Action research is a cycle that alternates "action" and "critical reflection".
- "I" used in Action research is a "Quantum Self".
- Action research requires a tension between commonsense and refined knowledge.
- Action research adopts two types of corroboration for refined knowledge.
- Action research requires two inflationary frameworks.
- Action research facilitates generalization via three stages of learning, namely, pedagogy, andragogy, and heutagogy.

Each of these lemmas is described in more detail below.

The Set of Lemmas

Lemma I: Action Research is a Meta-Methodology

That action researchers use a variety of methods is, in our view, accepted practice. Bradbury and Reason, for example, have argued on a number of occasions (2001, 2002, 2008) that action research is replete with methodological choices. This methodological eclecticism has led Reason and McArdle (2004) and Cassells and Johnson (2006) to suggest that action research is not a methodology at all but more an approach or orientation to inquiry. Dick (2001) also argues that action research consists of a family of methodologies that pursue the outcomes of both action (change) and research (understanding) – it is a generalized and fundamental process used by other methodologies. Furthermore, it is possible to utilize any research methodology or technique from statistical surveys to discourse analysis depending on what the data is indicating. Davies (2001) suggests that we are 'hard wired' for action research so that the capacity to be an action researcher is innate at birth and unconscious. It is

the mechanism by which humans learn through experimentation, make sense of the world and become certain of the invariance of our world.

Given that any research method can potentially be used in action research then perhaps action research may best be thought of as a meta-methodology (Dick 2003) that refines and enhances the methodologies it houses. For instance, action research has been used to enhance predicate calculus for the field of mathematics (Tay 2003). As a meta-methodology, Action research does not deny the value of mathematics and engineering concepts. In fact, it assumes them and goes beyond them by trying to encompass phenomenon that cannot be represented in a static, unambiguous and formal framework. Thus, action research serves as an independent methodology to analyse and refine the mathematical concept (Tay 2003). We cannot use a mathematical concept to refine itself as this attempt may be regarded as permitting a judge to judge his/her own case in a courtroom.

So, as a meta-methodology action research is flexible, involves thinking about thinking, and as a pragmatic and data-driven exercise is not tied to any particular methodology or technique.

Lemma II: Action Research is a cycle that alternates between "Action" and "Critical Reflection"

Those conducting action research are often involved in the following: they can use critical reflection (e.g. Dick 2001, Kemmis 2001) within each cycle; before action they can fit the action to the situation; after action, they can check if the action has worked as intended; if not, it can be amended and retried. In other words, within each cycle, reflection has two components. The first is a critical review of what was done

and what results. The second plans the next action in the light of what has been learnt.

As suggested by Dick (2001, p. 1) this can be represented by the following two paragraphs, namely,

"In situation S, to achieve Outcomes O, try Action A.

And if the plan includes also the assumptions underlying the definition of situation, actions, and outcomes, it is likely that both action and reflection will be enhanced".

The essence of this critical approach can be demonstrated via the engineering concept of Control Theory adopted by Friedland (1986). Control Theory suggests an open-loop control system as shown in Figure 1.
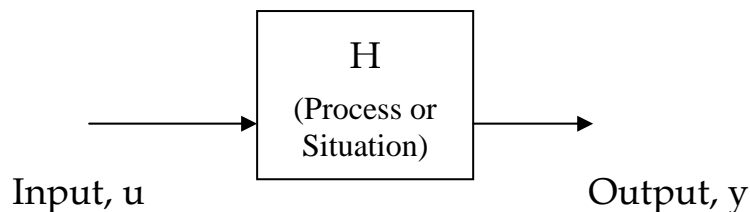

Figure 1: Open-loop Control

'H' is the process (or situation) that we wish to control (or improve). Call the input to the process 'u' and the output from the process 'y'. Suppose that we have a complete description of the process: we know what the output 'y' will be for any input. Suppose that there is one particular input,

say 'u1', which corresponds to a specified, desired output, say 'y1'. One way of controlling the process so that it produces the desired output 'y1' is to supply it with the input 'u1'. This is "open-loop" control. According to Friedland (1986), open-loop control is the kind of control employed by an expert billiards player. With an instinctive or theoretical knowledge of the physics of rolling balls that bounces of resilient cushions, an expert player knows exactly how to hit the cue ball to make it follow the planned trajectory. The blow delivered by the cue stick is an open-loop control. In order for the ball to follow the desired trajectory, the player must not only calculate exactly how to impart that blow, but also to execute it faultlessly.

However, not everyone can be an expert billiards player. This has prompted the need for a mechanism of feedback – a means of monitoring the output behaviour ("How am I doing?") and a means of correcting any sensed deviation from the expected. Instead of controlling the output of the process by picking the control signal 'u1' which produces the desired output 'y1', the control signal 'u' is generated as a function of the system error ("disconfirming evidence"), defined as the difference between the desired output 'y1' and the actual output 'y'. This error, suitably amplified ("critically reviewed and planned") is the input to the process as shown in Figure 2.
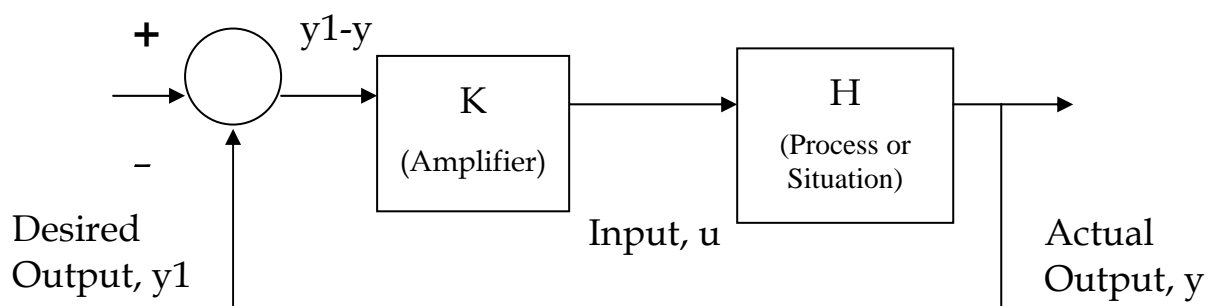

Figure 2: Feedback Control

According to Friedland (1986) it is generally possible to achieve satisfactory closed-loop performance for complex, even nasty processes. For example, it is possible to "close the loop" around a process 'H', which is itself unstable, in such a way that the closed-loop system not only is stable, but that the output 'y' faithfully tracks the desired output 'y1'.

Similarly, an action research cycle may be regarded as the conscious, intentional use of feedback mechanism to control the behaviour of a dynamic process. In fact, the two-fold explanations above also apply to an action research cycle; action research is concerned with changing situations, not just interpreting them. It is a systematically evolving process of changing both the researcher and the situations in which she works. Therefore, action research can be used for highly complex phenomena. Action research can change both the situation (the process) and the researcher that the control engineering example cannot.

Besides, the scope of work in an action research cycle is much wider and complex than an engineering closed-loop control. The notion of a "compensator" in an action research cycle may be regarded as a dialectical process that seeks out disconfirming evidence (i.e. error, y1 –y).

As pointed out by Dick (1999), it helps in understanding dialectical processes to distinguish them from two other forms of processes in general use, namely, adversarial processes and consensual processes.

In short,

- Adversarial processes operate by choosing one of a number of competitive views.

- Consensual processes operate by identifying agreements.
- Dialectical processes use disagreements to generate agreement.

During the dialectical process, participants learn to balance understanding and judging, describing and evaluating, and inquiring and advocating. Out of the dialectic between opposing views, greater understanding emerges.

A closed-loop control is in place when action research alternates between action and critical reflection. The adopted compensator takes the form of a dialectical process to constantly seeking out disconfirming evidences. Both theory and practice for a particular project can be developed through this dual process of continuous improvement that includes the use of cycles within cycles; the regular use of quality critical reflection; and planning within each action research cycle, which surfaces assumptions as well as plans.

Lemma III: "I" used in Action Research is a "Quantum Self"

The idea that the action researcher deals with real world contexts (e.g. Checkland 2010, Checkland & Holwell 2007, Gray 2009) is almost universal. The notion of 'real world' suggests an ontological dimension.

After Nita, ontology has two meanings (Strawson 1992). The first meaning takes reference to the real world, where experience is characterized in terms of what is "out there". The second meaning includes belief in the existence of the things in question such that these things are separated and related in time and space. It does not include belief in the existence of the properties or attributes in question. Strawson (1992, p. 55) calls the second meaning an objective reality and is explained as follows:

> Our picture of objective reality is a picture of a world in which things are separated and related in time and space; in which different particular objects coexist and have histories; in which different events happen successively and simultaneously; in which different processes compete themselves over time.

The notion of objective reality suggests that what we perceive an object to be is not simply a photographic image of the object. Firstly, as pointed out by Heylighen (1999), this image is not isomorphic to the phenomenon it is supposed to represent. For example, when we think about the number 168, we do not see 168 dots in our mind. There is no structural similarity between the concept of 168 and the collection of 168 screws in a hardware store. Secondly, consider the interesting question brought up by Heylighen (1999, p. 15), "if perception is nothing but the projection of images onto a screen, and memory not different from a set of photographic prints of those projections, then who is looking at the screen, and shuffling through the photographs?" To answer this question, one needs to understand the notions of "world" and "I" described by Sokolowski (2000, p. 44):

> The world is not an astronomical concept; it is a concept related to our immediate experience. The world is the ultimate setting for ourselves and for all the things we experience. The world is the concrete and actual whole for experience.

Thus, the world is like a context, a setting, a background, or a horizon for all the things that are given to us. The notion of "I" is explained by Sokolowski (2000, p. 44) as:

> Paradoxically, the "I" is a thing in the world, but it is a thing like no other: it is a thing in the world that also cognitively has the world, the thing to whom the world as a whole, with all the things in it, manifests itself. The "I" is the dative of manifestation. It is the entity to whom the world and all the things in it can be given, the one who can receive the world in knowledge.

Therefore, the answer to Heylighen's question is to introduce "I" as the little person (a "homunculus") who is sitting somewhere in the human brain. "I" is looking at different incoming and stored mental images in order to decide what they really mean, what should be done within them and which to which aspects should attention be paid.

However, as pointed out by Goldblum (2001), there is a pitfall on using "I" as the little person. There is no point having the stored mental images unless there was someone to read them. But who could that be? We ourselves cannot read the stored images, as they are supposed to be inside us. So there would have to this little person (a "homunculus") inside us to read the stored images. But, how would this little person understand what is written? Inside the homunculus there would have to be another one to read the stored images in the first little person's semantic network. It should be clear that this is a never-ending process, and so could not occur in the real world.

The never-ending "little person" issue may be addressed using the notion of "Quantum-self" by Zohar (1990). Zohar is fascinated by the behaviour of bosons. Particles divide into fermions (such as electrons, protons, neutrons) and bosons (photons, gravitons, gluons). Bosons are particle of "relationship", as they are used to interact. When two systems interact (electricity, gravitation or whatever), they exchange bosons. Fermions are well-defined individual entities, just like large-scale matter is. But bosons can completely merge and become one entity, more like conscious states do.

Zohar therefore claims that bosons are the basis for the conscious life, and fermions for the material life. The Bose-Einstein condensate is the extreme example of "bosonic"

behaviour (relationship, sharing of identities). Bose-Einstein condensate is behaviour when a group of cells merge as a single behaviour collectively. To draw an analogy, when 100 persons sings we should hear the voice of single person with an intensity of 100 persons. Zohar imagines that such a condensate is the ideal candidate to provide the unity of consciousness. The properties of matter would arise from the properties of fermions. Matter is solid because fermions cannot merge. The properties of mind arise from the properties of bosons in that they can share the same state and they are about relationships. This would also explain how there can be a "self". The brain changes all the time and therefore the "self" is never the same. I am never myself again. How can there be a sense of "self"? Zohar thinks that the self does change all the time, but quantum interference makes each new self sprouts from the old selves. Wave functions of past selves overlap with the wave function of the current self. Through this "quantum memory" each self reincarnates past selves. Zohar's quantum self is a "fluid" self, not a static self. Thus, it is the wave aspect of nature that makes a self possible, regardless of the fact that the matter of the brain changes all the time. By the same token, a self is woven into the waves of other selves and therefore becomes part of a bigger entity. The problem faced by the irony and paradox encountered in self-study may be illustrated via the notion of Schrödinger's cat story to explain Quantum Theory.

Schrödinger's cat is a famous illustration of the principle in quantum theory of superposition, proposed by Erwin Schrödinger in 1935. Schrödinger's cat serves to demonstrate the apparent conflict between what quantum theory tells us is true about the nature and behaviour of matter on the microscopic level and what we observe to be true about the nature and behaviour of matter on the macroscopic level.

Schrödinger's (theoretical) experiment consisted of placing a living cat into a steel chamber with no windows. In the chamber is a vial of cyanide and a very small amount of a radioactive substance. If even an atom decays a relay mechanism will trip a hammer, which breaks the vial, releases cyanide gas and kills the cat. There is no way an observer can know whether or not an atom of the substance has decayed at any point in time. Thus, an observer cannot know whether the vial has been broken, the hydrocyanic acid released, and the cat killed. According to quantum law and the superposition of states, the cat is both dead and alive because we cannot know the situation in the chamber. Only by opening the chamber can this state be altered. This is known as quantum indeterminacy or the observer's paradox: the observation effects the outcome, which would have remained unknown had it not been observed.

Quantum indeterminacy serves as an implication for a sense of boundary in action research. Action research is not research *on* humans. It is a research *with* and *by* particular people on their own work to help them improve what they do, including how they work with and for others. Therefore, as highlighted by Sokolowski (2000), the "world" as a whole and the "I" as the centre are two singularities between which all things can be placed. The "world" and "I" are correlated with one another to provide an ultimate dual, elliptical context for everything. Therefore, the mind is a public thing. It acts and manifests itself out in the open. It is not just inside its own confines. The mind and the world are correlated with one another. Things do appear to us and we, on our part display, both to us and to others, the way things are.

This lemma strikes at the heart of action research as a process in which the observer's assumptions are repeatedly tested in the real world by action; nothing is taken for granted.

Lemma IV: Action Research requires a tension between common sense and refined knowledge

Common sense consists of things we see, hear, smell, and feel as we walk along the street or in the country, the sound of cars, and that trains run on schedule everyday (or not).

According to Pepper (1942), there are three distinguishing features of common sense. First, common sense is not definitely knowable and perceivable. For example, we place an object shaped like a tomato on a table. We can doubt whether it is a tomato that we are seeing, and not a cleverly painted piece of wax. What the red patch is, whether is a substance, or a state of a substance, or an event, whether it is physical or psychological or neither, are questions that we may doubt about.

Second, common sense is secure. For example, we cannot doubt the fact that something is red and round then and there. Our mental process of knowing cannot sink lower than common sense, for when we completely give up trying to know anything, then is precisely when we know things in the common sense way.

Third, common sense is unreliable, irresponsible, and in a word, annoying. Sometimes, it may stand up to unlimited criticism, and then again break down at the first probing. Suppose red and round are our dominant features for describing tomatoes after many attempts. See what happens when someone introduces a picture of a red cherry that is also red and round and the debate has to be restarted.

As pointed out by Pepper (1942), the indefiniteness of much detail in common sense, its contradictions, its lack of established grounds, drive thought to seek definiteness, consistency, and reasons. Thought finds these in the

criticized refined knowledge but only to discover that these tend to thin out into arbitrary definitions, pointer readings, and tentative hypotheses, propositions or theories.

However, this prompts us the next question: When responsible cognition does find itself insecure as a result of the very earnestness of its virtue, where shall it turn too? The answer is to turn back to common sense, that indefinite and irresponsible source. In other words, refined knowledge exists in a vacuum unless it acknowledges openly the actual, though strange, source of its significance and security in the uncriticised material of common sense.

Thus, the circle is completed. Common sense continually demands the responsible criticism of refined knowledge, and refined knowledge sooner or later requires the security of common sense support. This tension between common sense and what we observe in daily practice, and then translating it into knowledge is a major activity in action research (e.g. Hase & Tay 2004, McNiff 2001, McNiff & Whitehead 2006, Reason 2006, Whitehead 2000).

Therefore, it is important to document the process and encountered common sense facts so we can learn from them. In fact, this might be the best we can do in order to ensure the circle between common sense facts and refined knowledge is complete.

The complete circle between common sense facts and refined knowledge also prompts the importance of context when applying action research. According to Northrop (1944) and Devlin (2000), in order to derive a mathematical theory, the mathematicians must first define the objects with which they are going to work. These objects can be numbers, points or lines. They then lay down certain laws called axioms to

govern the behaviour of the objects they have defined. After this point, there is no longer any need to know about the phenomenon that led to those axioms in the first place. On this foundation they built, through a series of logical arguments, a whole structure of mathematical propositions, with each proposition resting on the conclusion established preceding it. They are not interested in the truth of the axioms but ask only that these axioms be consistent.

However, there is a drawback when relying on safety of obscure mathematics without any clear visual picture or any relationship to context that led to those mathematical axioms. As highlighted by Kaku and Thompson (1995), it was Einstein's great pictorial insight that led him to propose the relativity theory that was unerringly correct during the first three decades of his life. The irony is, however, that in the last three decades of his life, Einstein failed to create the unified field theory largely because he abandoned his conceptual approach and relied solely on his derived obscure mathematics without any clear visual picture.

If all truths can be deduced from its axioms, it is called complete. However, as mentioned in the works of Paulos (1991), Dossey (1992), Dehaene (1997), Lavine (1998), Nolt, Rohatyn and Varzi (1998), Barrow (1999), Dewdney (1999), Kaplan (2000) and Barrow (2001), Gödel's Theorem says that if we write down any consistent axiom system for some reasonably large part of mathematics, then that axiom system must be incomplete. There will always be some questions or true propositions that cannot be answered or proved on the basis of these axioms.

Therefore, we have to accept the fact that we will be unable to solve all the problems using our axioms or assumptions. There will always be true propositions that we cannot prove

from these axioms. And as reflected in Einstein's painful experience, it is important to understand context.

Lemma V: Action research adopts two types of corroboration for refined knowledge

According to Pepper (1942), there are two types of corroboration for refined knowledge. There is corroboration of person with person, and corroboration of fact with fact. Pepper called the first "multiplicative corroboration" and the second "structural corroboration". And Pepper named the products of multiplicative corroboration "data", and the products of structural corroboration "danda". Pepper uses the example of finding out whether a certain chair is strong to illustrate the distinction between the two corroborations.

Using the multiplicative approach, we may sit on the chair ourselves. Perhaps several times, taking this posture and that and dropping it down in it with some force. And then, to be sure, ask several of our friends to try sitting on it. If all our friends and us agree that the chair supports us firmly, we may feel justified in believing the chair is a strong chair.

Using the structural approach, we examine the relevant facts about the chair. We may consider the kind of wood it is made of, the thickness of the pieces, the manner in which it is joined together, the nails and the glue employed, the fact that it was made by a firm that for many years has turned out serviceable furniture, the fact that the chair is an item of household furniture at an auction and shows evidence of wear as if many people had successfully sat in it, and so on. Putting all this evidence together, we should again feel justified in believing that the chair is a strong one.

First, the persuasive force of multiplicative corroboration comes from the number of observations and even more from

the number of men who agree about them. It is a social force. Second, the persuasive force of structural corroboration comes from the massiveness of convergent evidence upon the same point of fact. The distinction between the two stems from the fact the highly refined data are sharpened to so fine an edge that the highly refined danda seem to contain much more observations.

Understanding the two types of corroborations helps to address some of the questions that new action researchers pose pertaining to information collection. If the researcher prefers the collected information to be quantifiable, measurable, repeatable, she is adopting the multiplicative approach. If the researcher is working in complex and social situations, the information acquired tends to be a complex set of relationships between indiscrete variables and it is not possible to choose which variables are crucial. The researcher is taking the path of structural corroboration and in this case, may find danda useful.

It is important to note that action research does not imply that we can only select one type of corroboration for a project. In fact, we employ a combination of both in projects. In addition to the notion action research being a meta-methodology, the recognition of two types of corroboration also helps to explain the fact that action research does not deny the value of mathematics and engineering concepts.

Thus, action research does not stop a researcher from conducting an action research cycle that is predominantly scientific in nature, for the fact that action research recognizes quantitative and qualitative data as well as that of danda. More importantly, the critique that action research cannot be used in a "scientific" project collapses.

Lemma VI: Action Research requires two inflationary frameworks

There are two critical purposes in conducting action research. These are: a practical outcome or action involving a real world phenomenon; and a contribution to knowledge (e.g. Reason & Bradbury 2007, McNiff & Whitehead 2006).

The importance of framework can be appreciated via Medeleyev's great achievement in deriving the Periodic Table used in chemistry as highlighted in the work of DeLande (2004). Medeleyev was the first one to have the courage to leave open gaps in the classification instead of trying to impose an artificial completeness on it.

This matters because in 1860s only around 60 elements had been discovered. The holes in Mendeleyev's table were like daring predictions that yet undiscovered entities must exist. The holes in Mendeleyev's table imply the application of boundary.

As pointed out by Eoyang (1996), the area of distinction between the differing parts of a complex system is called a boundary. A boundary is not imposed from outside the system, rather it emerges because of differences within the system itself. A boundary becomes the focal point for change and adaptation of the system such as departmental barriers, functional differences, educational and cultural diversities within an organization.

Alternatively, we can use boundaries of known-system to "enclose" the area of "unknown". In other words, the boundary of unknown is made out of boundaries from those of the known. This "deliberate open gap" has a focus for future in that it helps to prompt and induce future research.

The "deliberate open gap" in Mendeleyev's table has contributed in the following ways: Medeleyev predicted the existence of germanium on the basis of a gap near silicon; Curie later predicted the existence of radium on the basis of its neighbour, barium; and a hundred years later, the set of transition elements (i.e. elements that are halfway between a organic and an inorganic element) helps the medical research communities to introduce chemotherapy for treating cancels – the application in chemotherapy is definitely something that Medeleyev himself was not aware at his time. Therefore, Medeleyev is said to have created an inflationary framework for the intensive and on-going exploration in chemistry in his times as well as for future generations.

Dick (2001) has refined the 4-stage action research cycle of "plan-act-observe-reflect" to a 2-stage action research cycle of "Action and Critical Reflection". This speaks to an interpretation of a generic framework being used for two distinct purposes as described by Reynold (2007):

1. A Framework-For-Practice (or "action") into a situation or context of inquiry;

2. A Framework-For-Understanding ("Critical Reflection") of a situation or context of inquiry.

The alternation between Action and Critical reflection in an Action Research cycle can be considered a brilliant approach for the articulation between the two frameworks.

Lemma VII: Action research facilitates generalizing via three stages of learning, namely, pedagogy, andragogy, and heutagogy

Generalizing is central to the definition and creation of valid public knowledge. As suggested by Metcalfe (2004), in order to make a contribution to knowledge for research communities (i.e. to make a knowledge claim), research communities require that significant knowledge claim(s) to

be justifiable to a research community and to be applicable to more than one situation. According to Cardwell (2003), generalizing refers to the ability of a researcher to make a justified extension of their conclusions to a whole category of objects or population of people.

Tay and Hase (2003) have offered a useful a model to assist the new Action Researchers in generalizing using three stages of learning, namely, pedagogy, andragogy (Knowles 1970), and heutagogy (Hase & Kenyon 2000).

Pedagogy is the first stage. This stage focuses on the orientation provided for new candidates to the action research program. An effective orientation contributes a great deal in sustaining candidate's commitment and satisfaction in the research program.

New candidates learn to use tools such as focus groups, search conference, stakeholder analysis, interviewing, and grounded theory that can assist them in data collection. At the same time, they also consolidate their research proposal with their supervisors or facilitators. At the end of this stage, the new-comers can call themselves qualified research candidates as they know not only how to use the required research methodology but have also clarified fully the research area they will pursue. Figure 3 summarises a candidate's knowledge with respective to the research context.
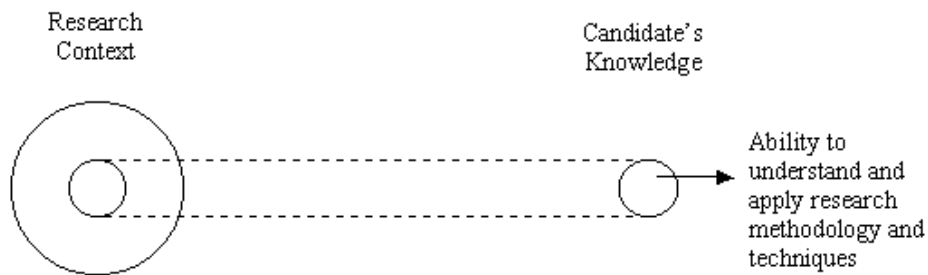
Figure 3: Knowledge gained at the end of Pedagogical Stage.

Andragogy, adult learning (Knowles 1970), is the second stage. The ability to construct an abstract representation for the research context is the primary emphasis of this stage. This stage provides research candidates the opportunity to acquire more insight into their problem situation through the process of articulating, structuring and critically evaluating a model of the research context. As pointed out by Ford and Bradshaw (1993), modelling is purposive. That is, to be involved in modelling, it is necessary to apply the model for particular reasons that together determine what should be modelled, how to model it and what can be ignored. This is in accord with the notion of andragogy.

Figure 4: Knowledge gained at the end of Andragogical Stage.

The last stage is Heutagogy, which is defined by Hase and Kenyon (2000) as self-determined learning. With the

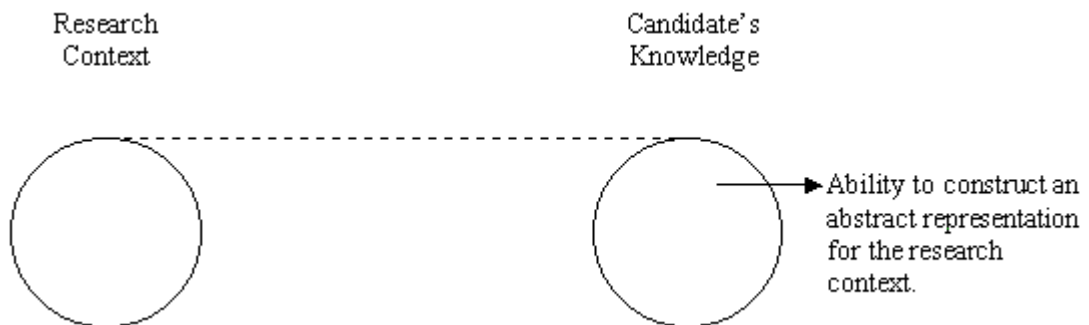intellectual framework of ideas and abstract model derived in the andragogical stage, the research candidate proceeds to this final stage. There are two tasks in this stage. The first task is to conduct a deeper level of thinking on the abstract model by determining the set of factors that systemically cause the fluctuating patterns. As pointed out by Maani and Cavana (2002), these factors could be economic, social, political or structural and the critical thing in this task is to understand how these factors interact. However, the research study does not end at this stage. To an engineer and a mathematician a complex number is the square root of a negative number; it has two parts, known as the real and imaginary parts. Complex systems also have real and imaginary parts. The problem is to differentiate between the two, which is difficult because one person's reality may be another's imagination. Task one only looks at the reality systemically. Therefore, it is the role of task two to make one's imaginary part explicit such that it can be understood and used by others. It is the imaginary part that can add new knowledge/new research outcome for the research community. It represents the candidate's mental models that influence why things should do, should not do or do not work. According to Maani and Cavana (2002), mental models are based on the beliefs, values, and assumptions that we (privately) hold, and underlie our reasons for doing things the way we do them. In fact, it is task two that gives the name "heutagogy" for this stage. Figure 5 shows the knowledge acquired at the end of this stage.
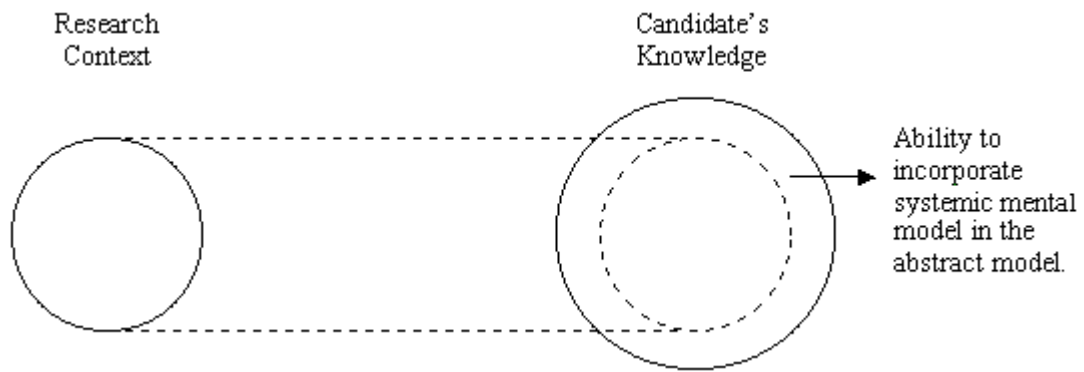
Figure 5: Knowledge gained at the end of Heutagogical Stage.

As highlighted in Hase and Kenyon (2000) and Sankaran and Tay (2003), throughout this stage, each researcher directs his/her own path of learning. Each candidate is responsible to derive the thematic concern(s) and relevant research question(s), develop a research design, and plan a research implementation that lead to the final draft of his/her thesis. The self-determined nature of these processes is characteristic of heutagogy.

Thus, action research is an emergent process that involves different levels of understanding increasing in complexity and depth.

Conclusion

Action research is inscribed within us the moment we are born in his world and it will be with us till our last moment on Earth. It is an activity about activity. It is a gateway to enable us to make unknown known. It is an innate and unconscious process that can take many guises. As pointed out by Davies (2001), the value of focusing on action research is to make this process conscious. This in turn provides potential for further deliberate improvement and for the checking of one's observations, reflections and plans with

others. The outcome of the second stage is an abstract model that is able to explain their problem situation concisely and comprehensively.

Another challenge in applying action research is not to be frightened of conflict and ambiguity but see these states as an opportunity for learning. Perhaps even the creation of instability provides the atmosphere for learning to occur. When we are confused and anxious, we can ask the questions that lead to deeper learning. Besides, while conducting action research, we must also constantly remind ourselves the importance of curiosity. Sometimes we get so focused on solving a problem that we neglect to be curious about the things we don't yet understand. Remaining curious for a while may let us find an even better solution - or perhaps find a solution when our initial ideas were simply wrong.

There is an inherent ambiguity in action research found in its emergent nature and its principle role in attempting to understand highly complex social phenomena. We hope that our seven lemmas go someway to addressing this ambiguity and providing an ontological framework for explaining what it is that we actually do when embarking on this most natural of processes.

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Organisations in Crisis: The Hard Case for the "Soft" Skills of Action Learning
Vicki Vaartjes

Effective organising in the midst of difficult economic conditions requires effective leadership. Learning about leadership and learning to actually lead are two different yet inter-related things. This paper describes an approach to leadership development in the form of a program that acknowledges the need for building both capacity (learning about leadership) and capability (learning to actually lead) as essential to supporting grounded leadership effectiveness. The application of an Action Learning methodology as part of the program provides a valuable mechanism to support application on the job, and to facilitate learning so that leaders come to a deeper understanding of what action to take and what action is most effective within their unique context. The paper cites two cases of programs designed and delivered in Australian state government agencies and the learning outcomes that emerged for the participants and the facilitator.

Introduction

Now more than ever, the world seems to be facing unprecedented complexity. Unlike the economic meltdowns of the 1980s and 1990s, what we face now is so obviously and visibly global that there is no escape. The naivety and ignorance that provided some protection then, is not available to us now as we are faced day by day, with this highly publicised global reality.

Many of my recent organisational experiences suggest that the crisis is showing up in familiar ways: budget cuts, staff

reductions, cuts to discretionary spending, and a focus on core operational functions. What seems less familiar is how it is showing up in leadership behaviour. The focus at the turn of the 21st century toward collaborative engagement and principle-driven planning and decision making, on the basis that this would create sustainable and effective outcomes, seems to be overshadowed by the reappearance of old world command, control and top-down decision making. The "hard" decisions, it seems, are being taken behind closed doors and being handed down and *rolled out* fully loaded with untested assumptions – and less thought about consequences.

Action Learning offers a means of immersing in complexity with the intent to create change and relies upon the development of deeply human capabilities – listening, questioning, integrating, reflecting, analysing, deciding and acting. Capabilities of these kinds are often referred to as "soft" skills. More than being just about "doing", my proposition is that the acquisition of these capabilities brings with it a deeper shift in ontology or way of "being"; that it is this ontological shift that sets us up for greater possibilities when the pressure is on.

This paper explores, through the lens of leadership capability development, how Action Learning based development can pay off in organisational settings. This connection is made by drawing on recent cases from the Australian public sector.

Origins

Action Learning is an approach to adult development that achieves two important and complementary aims: knowing

what action to take, and knowing what action is most effective in the context and circumstances in which it is taken. Although there is significant value in learning about leadership in terms of theories, concepts and models, the test of effective leadership comes through action and outcomes that are *situated in* the context of relevance to the individual leader.

Action Learning is an approach that is grounded in the phenomena of actual experience: "action learning involves learning-in-context" (Passfield 2001, p. 39). So for leaders, it is the experience of leadership – the tensions, challenges, triumphs and results – that forms the grist-for-the-mill of learning. Experience is supported by existing knowledge (models, frameworks, theories) to assist the interpretive process (but importantly, not to dictate interpretation). In an Action Learning developmental process, it is the outcomes by which a leader's success and effectiveness is measured that become the most grounded indicator of the effectiveness of the development undertaken.

The British form of Action Learning, as originally developed by Reginald Revans in the 1950's (Revans 1990; Revans 1982), is a process through which groups of managers in Action Learning sets, purposefully and supportively achieve both action on real issues, and learning in and through their action. The underlying premise of the approach is that "managers are people of action who learn from action" (Dotlich & Noel 1998, p. 121) and that within a supportive environment, managers will share and help each other solve problems. Mumford (1995) describes these underlying assumptions as:

1. Managerial learning requires taking effective action.
2. The best way to really learn to take effective action is to actually take action.

3. The most effective form of action for learning comes from working on issues or projects of significance to the managers and their organisations.

4. Whilst managers retain individual responsibility for outcomes, the process of learning is social: "Managers learn best with and from each other" (Mumford 1995, p. 36).

Over time Action Learning has been hybridised to take on diverse forms in many domains of adult learning and organisational development, including education, team building, and leadership and management development (Dick 2009, Keys 1994, Marquart 2004, Smith 1998). The approach has been applied by a range of organisations including Citibank, Shell Oil, General Electric, Johnson & Johnson (Dotlich & Noel 1998), Pepsico (Raelin 1997), Motorola, General Motors, Marriott and British Airways (Marquardt 1999). When applied to management development Action Learning seeks to build twenty-first century leadership abilities, including collaborative leadership, problem solving (Dick 2009) systems thinking, risk-taking, visioning and the ability to manage change (Dotlich & Noel 1998).

The Cases

In this article I offer two cases in which Action Learning was paired with workshops and other in-situ activities. The intent was to offer an immersion in learning designed to support insight, inspiration, and personal transformation at an individual level, and enhanced team work, collaborative leadership, and improved performance and organisational outcomes at a collective level.

In making sense of the outcomes, I have drawn on my observations of, and reflections on, working with Action Learning in Australia's public and private sectors for over 12 years. The interpretations I offer are a combination of personal reflections, and conclusions drawn from reflective conversations with program participants, often informally. Therefore many of the assertions made throughout have relevancy only to those who own the interpretations. They are offered to the reader with this limitation in mind, and with the hope that they will provoke thought and encourage consideration of the potential of Action Learning in the context of organisational and leadership effectiveness.

The descriptions of each case identify the form of Action Learning utilised in the programs. For the purposes of definition, the "original model" refers to the form of Action Learning developed by Revans. The intention of this model is to generate questions about real world problems with which the learning set participants are dealing in their day-to-day experience. The questions raised by fellow set members have the intent of driving changes to action in the real world that improve the problem, and learning takes place by reflecting on the experience of changing the action.

The "operational model" refers to the Model as developed during the quality movement (often referred to as the US model). The intention of this model is to facilitate continuous improvement by focusing the learning set on problems or opportunities as the core of the learning.

CASE A: Project-based Action Learning program for the development of an executive team

Form of Action Learning

The process utilised an adaptation of original and operational models of Action Learning (Refer Figure 1).

Action Learning offered an approach to meeting the specific leadership development and service delivery system improvement needs of a large public service client.

The participants of the process were 14 members of the executive team.

Intent

The intention of the program was twofold:

- To enhance individual and team leadership capability, and
- To facilitate a significant service reform program (the project)

Frequency

The learning sets operated on two levels:

- Set meetings (learning workshops) that were off-site 1-day events held every 2-3 months over a 17-month period, facilitated by an external consultant (the author).
- Sub-set meetings of 3-4 people (learning groups) for 1-2 hours every 2-3 weeks in the interim periods between the workshop events. These set meetings were self-managed by participants.
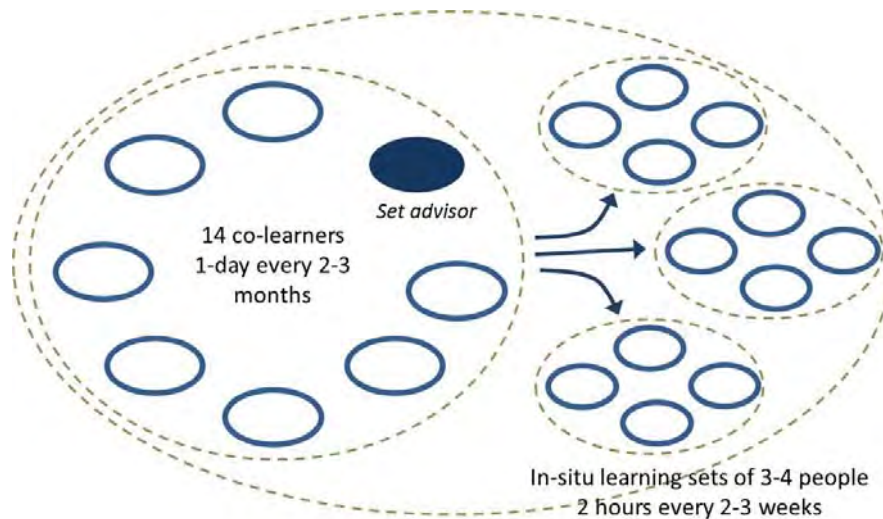
Figure 1. Program structure.

Key roles

Set advisor: In this case the set advisor was an external consultant (the author) whose role was to focus on the application of effective processes to facilitate explicit learning and leader capability building.

Co-learners: Every member of the set shared the roles of story teller, recorder and questioner. Learning set discussions were usually seeded by a salient or emerging issue or opportunity.

Principles

The principles of operation were identified by the participants during the first workshop event and were re-assessed throughout the 17-month program. Principles were:

- Fearlessness,
- Real time outcomes,
- Quality versus Quantity (referring in most part to how the organisational work would be undertaken), and
- Honesty and transparency.

Outcomes

The following statements are indicative of the kind of outcomes that were identified jointly by facilitator and team during their experience of the program.

Individual: increased understanding of impact of own style, development of capability to manage self and relationships.

Team: increased capacity for team leadership which was evident in the timeliness and effectiveness of information sharing, team decision making, managing the team dynamics and processes, managing team performance and outcomes.

Organisational: achievement of key project milestones and outcomes; engagement of all staff in the process, and achievement of shifts in performance that were reflected in improvement of many of the critical Departmental performance indicators.

Case B: Project-based Action Learning Leadership Development Program

Form of Action Learning

The process utilised an adaptation of original and operational models of Action Learning (Refer Figure 2). Action Learning was a mechanism for meeting the specific mid-level leadership and emerging leadership development needs of a small public service client. The participants of the process were 10 senior staff nominated from across the organisation.

Intent

The intention of the program was twofold:

- To enhance individual leadership capability, and
- To facilitate achievement of challenging workplace innovations (the "project").

Frequency

The learning sets operated on two levels:

- Set meetings (learning workshops) held off-site 1 and 2-day events held over a 4 month period, facilitated by an external consultant (the author).
- Sub-set meetings of 3-4 of the participants (learning groups) for 1-2 hours every 2-3 weeks in the interim periods between the workshop events. These set meetings were self-managed by participants, and focussed primarily on supporting progress on individual projects.
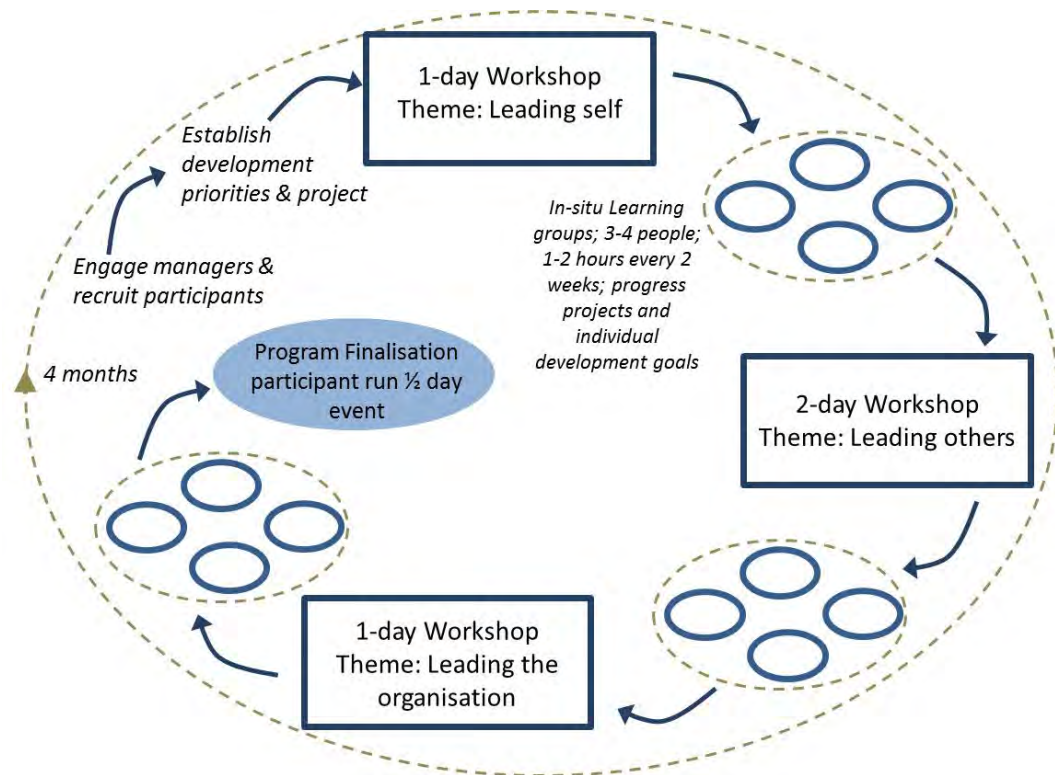
Figure 2. Program structure.

Key roles

Set advisor: In this case the set advisor was an external consultant (the author) whose role was to focus on the application of effective process to facilitate explicit learning and leader capability building.

Co-learners: Every member of the set shared the roles of storyteller, recorder and questioner. Learning set discussions were usually seeded by a salient or emerging issue or opportunity.

Principles

The principles of operation were identified by the participants during the first workshop event and were re-assessed throughout the 4-month program. Principles were:

- Grow practical capability,
- Achieve valued outcomes, and
- Offer opportunity for personal growth.

Outcomes

The following statements are indicative of the kind of outcomes that were identified jointly by facilitator and participants during their experience of the program.

Individual: increased understanding of impact of own style, development of capability to manage self and relationships and implementation of individual development plans.

Branch: achievement of branch level outcomes through the achievement of workplace projects.

Organisational: growth in cross-organisational capability for in-situ learning; building cross-organisational awareness and relationships; building capability for cross-organisational projects.

Some key learning outcomes

My experience as facilitator of these programs was full of rich learning. In the process of experiencing the journey with and alongside participants I was often struck by the reflections, reactions, insights and actions to which I was a witness. In the following, I describe some of the key outcomes that I believe relate most to the issue of "organisations in crisis", and how this approach to capability development can build grounded skills to support survival, and indeed thriving in times of difficulty. I have separated each into its own mini-discussion, but my hope is that it will be clear to the reader how interconnected and interdependent the learning outcomes actually are.

Heightened awareness of systemic tensions

By focussing the development around a combination of workshop and project-based learning, participants in both Cases A and B became more aware of the tensions that existed within their system. In particular, the tensions that presented barriers to action and achievement. These presented in many forms: embedded systems whose value-base was incongruent with a desired way of working; power dynamics which impeded decision making and implementation, often in the form of inaction; cultural patterns, such as "oppositional" behaviours where a pushing against change was predominant, irrespective of the value of the change itself. Passfield (2001, p. 39) describes this in the following:

> What is distinctive about action learning in an organisational context is that it involves learning through engagement with the dynamics of the ongoing organisation. This means dealing with the realities of politics, power, procedure, culture and systems. It also entails dealing with who we are and how we define ourselves, our role and our capacities within that context.

For most participants, this was part of a growing sense of their own organisational norms and culture, and how the dynamics of their culture affected their capacity as leaders to lead. The ontological shift was one of emerging awareness. Through careful and purposeful reflection and examination, the points of tension moved from transparently operating in the background, to being more visible, because of the way in which they were *bumping up against them*. As participants payed more conscious attention to this phenomenon, rather than just accepting it as *the way things are*, they started to ask important questions of themselves in their role as organisational leaders:

- In what ways do these tensions affect my ability to carry out my role and responsibilities?
- How will I define success in terms of change in this system?
- Where is my effort going to be of most value?
- What is possible?

They carried these rich questions back with them into their work, and back into the workshop and Action Learning group sessions. If we accept that inquiring into a phenomenon, changes the way in which the phenomenon is experienced, then merely carrying the questions opened the potential for deeper systemic change. As the participants engaged in their every-day life as organisational leaders, they brought with them a growing cognisance of how to "be" in their system, as well as how to "do".

The challenge of valuing reflection

My assessment is that "reflection" is in most part seen as synonymous with the practice of Action Learning. The "plan – act – observe – reflect" cycle is well known and iterations of cycles similar to these have been applied in the context of continuous improvement as part of the quality movement for many years. A well known example is Edward Deming's "Shewart" cycles, Plan-Do-Check-Act and Plan-Do-Study-Act. Both support rigour in the practice of the whole cycle, and in particular stopping, paying attention to what happens after action, and then changing the plan or approach according to new knowledge – "check-act", "study-act". Cunliffe describes reflection as "a systematic thought process concerned with simplifying experience by searching for logic, pattern and order" (Cunliffe 2002, p. 38), a process that at its foundation, requires a valuing of time and attention given to the conscious exploration of experience.

My experience in Cases A and B included what I believed to be a mild push back by some participants when using reflection in the workshop setting. This tended to be evident in morning reflection sessions, and was accompanied by a kind of twitchiness or sense of anticipation in the group. When this occurred, and I shared my sense of what was happening with participants, comments like these were shared: "we have so much to do and I just want to get on with it"; "I don't know why we need to spend so much time talking about what we have already done".

My experience of both case A and B organisations was that their predominant culture was one that valued action – task, achievement, doing. Reflection, even in the context of a development program, was seen as a form of inaction, even to the extent of feeling like time was being wasted. If reflection was seen as "inaction" then it was not valued. A shift toward a valuing of reflection did occur, but this was a

slowly emerging sense of how reflection supports explicit learning and better informed action and outcomes that came through their experience of the program over time. It is not something that participants could be told, but something that they had to experience in order to shift toward truly valuing it. This tended to vary for different participants, and I think it is fair to say that some were still unconvinced even at the end of their program experience.

The value of keeping it simple

In my experience of leadership development, it is often the simplest of things that can prove to have the most profound effect; the things that are easily skipped over because they seem to be so self-evident. One such thing in these programs was the value of the relationships between participants that developed as the programs progressed. I was struck with how often this was mentioned as a genuine benefit of the Action Learning approach.

Time and again, feedback from participants as they progressed through the various stages highlighted the value of these connections, from an interpersonal as well as organisational knowledge point of view. Quite apart from the insights that emerged, the learning groups fostered collaboration and collegiate support in a way that they had not experienced in their prior organisational work. The groups provided a constructive and personalised means of appreciating the situations they each faced as well as debriefing frustrations and challenges. Significant personal relationships were formed that continue to be a source of ongoing collegiate support.

Shift in focus away from task outcomes alone, to process

For task-focussed people, getting the job done is usually the main game, and achievement of task is valued, acknowledged and rewarded. Participants in these programs were also supported to pay attention to the process – *how* they did what they did, and what was most effective in achieving the outcomes they achieved. This is connected to the notion of their organisation being experienced and understood in a systemic way where the question of "how" holds a status equal to "what".

I saw this as a critical shift because their increasing awareness of the importance of paying attention to process as well as outcome, provided opportunities for experimentation with different approaches to action. Participants became more aware of the part they played, the importance of planning and testing assumptions, and of the emergence and unpredictability of their system. They learnt about the need to become effective observers of themselves in action so that they could adjust their approach to achieve better outcomes. To clarify, they were not learning to be observers in the sense of being distanced and objective, but in the sense of paying attention, and noticing what was happening with self and others.

At a very personal level it concerned paying attention to what "struck" them (Cunliffe, 2002) and sitting with the feeling of being struck for long enough to allow meaning to form. It was no longer just about getting things done, but ensuring that the way things were done was enabling and outcome focussed. It was indeed a case of paying attention to the "space between the spokes"…

> The master smiled and asked his disciples to imagine the wheel of a chariot. "What determines the strength of a wheel in carrying a chariot

forward?" After a moment of reflection, his disciples responded, "Is it not the sturdiness of the spokes, master?" "But then why is it", he rejoined, that two wheels made of identical spokes differ in strength?" After a moment, the master continued, "See beyond what is seen. Never forget that a wheel is made not only of spokes but also of the space between the spokes. Sturdy spokes poorly placed make a weak wheel. Whether their full potential is realised depends on the harmony between them. The essence of wheel making lies in the craftsman's ability to conceive and create the space that holds and balances the spokes within the wheel" (Author unknown).

Was it really about the project? Yes and no!

In each of these programs, the individual and groups' projects offered a critical focal point for the Action Learning process. The project, in each case, was carefully selected against specific criteria, and endorsed by the organisation as being of strategic significance and difficulty.

As the programs proceeded I observed a growing awareness that although the project was important, of equal importance were the learning outcomes that came from how the project was carried out (process), and the role that relational support (through participant sub-groups and learning groups) played in creating a "learning focussed" environment. Project outcomes were important because the projects offered a tangible means of creating a return on the investment in development. However of equal importance was the learning and insight that came from paying explicit attention to process, culture and their own behaviour, and how all these effected outcomes.

Showing up differently: The courage to be "counter-cultural"

In both cases the program offered a space in which insight and different thinking was encouraged. This presented in what I experienced as an emerging awareness and courage

to question the status quo and to behave in counter-cultural ways.

In Case A, this different way of "showing up" became visible in the way the executive team examined and challenged their own internal team dynamics, and in the way they chose to engage their staff in the service reform project. The team made an explicit commitment to ensure that the way they facilitated the change process would bring staff on the journey, tap into their grounded wisdom, and take the time they needed to ensure that the process supported change that was sustainable in the longer term (in terms of the program this showed up by the team extending the program from 12 to 17 months to allow the extra time and space).

This outcome presented differently in case B because the participants in this case were a mixture of senior staff from across the organisation. The final program stage of Case A involved the participants designing and organising an event whereby they could communicate their experience and learnings to other stakeholders within their organisation, including their management sponsors. In turn, the event provided an opportunity for their efforts to be acknowledged and celebrated.

Instead of using it as an opportunity to talk about their projects, the group saw this event as an opportunity to step up and to engage with their "audience" in a way that was challenging and counter cultural. Rather than set up a typical formal presentation, they chose instead to spend the time engaging with their audience and sharing the experience of their journey in a range of creative ways, using interviews, multi-media, and participatory activities. Invited attendees were both surprised and impressed with what they experienced. I saw this as indicative of a powerful shift; one

that demonstrated an emerging collective courage to take a counter-cultural path, and a sensitivity to do so in a way that was constructive and engaging. They had experienced the program in this way and it was their intent as a group to engage their organisation similarly.

Deep learning from simple things

One of the things that struck me about my experience in both these programs was how often it was the simple things that participants reported as being of the most value to them. Comments like: "understanding myself better", "getting to know others", "working together on an important task", "learning how to work with others" were the kinds of things that were most often cited as being of greatest value.

I think that this struck me because as facilitator, I am an active professional in developing my capabilities, and this often leads to exposure to amazingly creative and "leading edge" ideas and activities designed to tap into deeper issues in increasingly sophisticated ways. I know that I certainly enjoy this part of the design and facilitation work. However, my experience with these programs reminded me that it is easy to be drawn into the complexity of process and lose sight of what simplicity can bring. Sometimes it may be simpler than we think to facilitate development that is of deep value.

Conclusions

My experience of these cases and others since, suggest that applying a rigorous project-based Action Learning framework, combined with workshop style learning is an effective and practical approach to leader capability development. Not only do those who participate learn new

things, they bring those insights back to their roles and workplace, and are explicitly supported to apply learning to deliver outcomes. When times are tough, organisations depend heavily on the capability of leaders to be insightful, aware and able to create change quickly. My belief is that the development of heightened systemic awareness and capability, that is possible through project-based Action Learning, is congruent with this need, and worthy of the investment of time and effort.

Authors Reflections

My own personal and professional journey has included many moments where it has been easier to respond to pressure by retreating to safety and what is known. In such situations, my tendency is to trust perhaps naively, in the predictability of past action that generated success, and assume, equally naively, that the same action will be successful this time. Indeed I have also been subject to such behaviours in others, bearing the consequences of decisions made in haste, or made without the benefit of deep reflection or collaboration.

Sitting with the fear and anxiety of unknowing, whether self or other inflicted, is not a comfortable space for me. I would much prefer to have a sense of clarity about my life and what I am and will be doing. And yet it is those very moments when I have done so, found places of stillness and calm in the midst of the turmoil, that have yielded the most significant experiences and opportunities.

One such opportunity is what is taking my time and attention right now and into 2011. Our Pacific neighbour, the Solomon Islands has, since 2003, been offered a range of support from Australia and Pacific nations under the

Regional Assistance Mission to the Solomon Islands (RAMSI). As part of this, I now have the privilege of working as Learning and Development Adviser to the Public Sector Improvement Program. Specifically this includes supporting the SI Institute of Public Administration and Management, a small but capable and enthusiastic team, to establish learning and development programs to support the ongoing growth and success of their public service. As the Solomon Islands continue on their journey of self-governance, IPAM is positioned as a key player and leader in culturally appropriate leadership development, and a key methodology in the approach is Action Learning. So the journey continues.

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Applied Learning and Action Learning: Frameworks for Sustainability Skills in Australian Water Industry Training

Keith Davis

This article outlines a conceptual capacity building, applied learning, action learning framework for integrating adaptive sustainability skills in vocational education and training within the Australian water industry-training sector, responding to identified skills gaps in the industry and recent government policies. Concepts of joining-up pathways for integrating skills for sustainability into the water sector using affective, applied learning, action learning and action research approaches are innovative for the industry. Certain elements proposed are under various phases of development, such as updating national water training packages. Example linkages within secondary school VCAL courses are in their infancy. Further action research and project development is necessary for constructing the details this outline articulates to realise a practical, experiential learning program meeting the needs of stakeholders.

Introduction

This article outlines an adaptive, capacity building approach, utilising applied learning, action learning frameworks, for integrating "sustainability skills" called for by recent government Vocational Education and Training (VET) policies, into Australian water industry-training.

The National Water Skills Strategy *Water for the Future* (Department of the Environment, Water, Heritage and the Arts 2009a) reports an emerging and significant skills gap in the water industry sector in Australia. Almost half the people working in the sector by the year 2018 will need to be recruited during the present decade, and a proportion of these will require tertiary training. "Key skills shortages are expected in science and engineering, management, technical and trade areas and this is expected to continue into the foreseeable future" (Department of the Environment, Water, Heritage and the Arts (2009a, p. 2).

State and commonwealth jurisdictions agree that planning for future demand in skilled water sector occupations is a key action for government to encourage "integration of knowledge about new and emerging technologies, environmental management and sustainable water practices into existing training packages" (Department of the Environment, Water, Heritage and the Arts 2009a, p. 13).

The Council of Australian Governments (COAG) supports these strategic directions through the *Green Skills Agreement* (Department of Education, Employment and Workplace Relations 2009). Australian governments have acknowledged that:

> decisive action is needed to support Australia's transition to a sustainable, low carbon economy. …This transition will have implications for training providers and workplaces across the Australian economy. In many instances, existing jobs will need to be redesigned through up-skilling or re-skilling, to meet the skills needs of individual firms and entire industries in the move towards a more sustainable future (Department of Education, Employment and Workplace Relations 2009, p. 2).

Integration of "sustainability skills" within industry training packages, and introducing an applied learning framework

for building adaptive-capacity through vocational training made relevant to emerging challenges in the water industry, supports the sector in moving towards a more sustainable future.

Sustainability skills imperatives

Defining sustainability

Sustainability is a somewhat overused, but poorly defined concept. A most frequently cited definition of sustainability [cf. sustainable development] comes from the World Commission on the Environment and Development's 1987 report *"Our Common Future"*, known also as the Brundtland Report: "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development 1987, p. 43).

The Brundtland Report illustrates the complex, systemic nature of interconnected crises demanding attention for more sustainable development, indicating the need for adaptive skills for sustainability in the globalised economy's workforce.

> Until recently, the planet was a large world in which human activities and their effects were neatly compartmentalised within nations, within sectors (energy, agriculture, trade), and within broad areas of concern (environmental, economic, social). These compartments have begun to dissolve. This applies in particular to the various global 'crises' that have seized public concern, particularly over the past decade. These are not separate crises: an environmental crisis, a development crisis, an energy crisis. They are all one (World Commission on Environment and Development 1987, p. 4).

Uncertainty – the adaptive challenge

Describing three pillars for decision-making, Gallopin's chapter on characteristics determining the types of actions we must take for shifting towards sustainability skills is significant. Gallopin claims that "[i]n seeking sustainable development, we must overcome the obstacles of lack of understanding, unwillingness to change, and lack of adaptive capacity" (Gallopin 2002, pp. 361-392).

Emphasis on adaptive learning capacities and actions for sustainability have been analysed by Beck (1999) in relation to the increasing uncertainty of what he terms "the new modernity", and the need for new skills, more readily adaptable to participation in the new, emerging sustainability economy.

> One thing is clear. Endemic uncertainty is what will mark the lifeworld and basic existence of most people – including the apparently affluent middle classes – in the years that lie ahead. …Your skills and abilities are obsolete, and no one can tell you what to learn so that you will be needed in the future (Beck 1999, p. 12).

Sustainability therefore, can be viewed as a critical adaptive skills challenge for the future of a now global economy, and arguably, an applied learning challenge for our whole civilization.

Government policies

The Australian and state and territory governments endorsed the Green Skills Agreement through COAG in December 2009.

> The Green Skills Agreement seeks to build the capacity of the vocational education and training (VET) sector to deliver the skills for

sustainability required in the workplace and to enable individuals, businesses and communities to adjust to and prosper in a sustainable, low-carbon economy.

…This transition will have implications for training providers and workplaces across the Australian economy. In many instances, existing jobs will need to be redesigned through up-skilling or re-skilling, to meet the skills needs of individual firms and entire industries in the move towards a more sustainable future. (Department of Education, Employment and Workplace Relations 2009, p. 2)

Responding to the Green Skills Agreement, Government Skills Australia is re-writing all national industry-training packages to include sustainability principles and competencies (Government Skills Australia 2010). Government Skills Australia's website defines 'skills for sustainability' or 'green skills' as:

The technical skills, knowledge, values and attitudes needed in the workforce to develop and support sustainable, social, economic and environmental outcomes in business, industry and the community. Industry, government bodies, individuals and policy makers are focused on sustainability issues such as; climate change, water scarcity and carbon trading to reduce carbon dioxide emissions and the 'footprint' of human activity on the ecological system that supports us (Government Skills Australia 2010a, online).

The Victorian Government action plan for improving sustainability skills for industry, while meeting the needs of the emerging "green economy", titled, *Jobs for the Future Economy, Victoria's Action Plan for Green Jobs* (Department of Innovation, Industry and Regional Development 2010), includes Action 12: Sustainability Skills for Industry, stating:

Green skills will become increasingly important as industries seek to operate in an environmentally sustainable way. …Victoria is also working closely with the Commonwealth and other States to implement a National Green Skills Agreement that will identify and address green skills gaps in training packages (Department of Innovation, Industry and Regional Development 2010, p. 24).

And, one of the key expected outcomes of the (COAG) National Green Skills Agreement is:

> improved linkages and collaboration across schools, VET and higher education to ensure an integrated sustainability pathway for learner's and trainees and to support careers and jobs pathways for the Australian workforce (Department of Education, Employment and Workplace Relations 2009, p. 3)

Stakeholders in learning for sustainability

Practical stakeholders interacting with these policies for change include: the water industry training sector, agents delivering the Australian Government National Action Plan for Education for Sustainability, *Living Sustainably,* (Department of the Environment, Water, Heritage and the Arts 2009b) in workplaces and schools. Technical And Further Education (TAFE) institutions, universities, secondary schools delivering Victorian Certificate of Applied Learning (VCAL) and VET school programs, teachers, and the water industry itself; particularly transitioning workers up-skilling to meet employer's training objectives, or for greater job security or advancement.

Industry skills in context

The water industry delivers services vital to communities and industries throughout Australia. These services include irrigation water, potable drinking water supplies, sewage treatment services, including wastewater and recycled water services. Maintaining considerable infrastructure assets and technical skills are required for delivering these services.

> The water industry employs water and wastewater treatment operators; networks maintenance personnel and specialists, such as hydrographers; environmental advisers; water quality officers; infrastructure and treatment systems designers and managers; remote

essential services operators; trade waste operators; dam safety operators; and water scientists, including chemists, biologists, microbiologists, lock operators, and ground water hydrologists (Government Skills Australia 2010b, online).

"Specialised skills shortages in the water sector have generally occurred because industry has not invested in training for the future, preferring instead to 'buy in' the skills on as as-needs-basis" (Department of the Environment, Water, Heritage and the Arts 2009a, p. 9).

Professor Charles Ainger of Cambridge University succinctly illustrates the systemic need for a new sustainability paradigm in the water sector in Australia.

> Water infrastructure is part of the critical interface between society and the environment. It works both ways, protecting humans from environmental risks and providing a water resource, while also protecting the environment from our wastes. So, we have to work to ensure that each and every new project moves towards sustainability (Ainger 2010, p. 6).

A water industry, with adaptable knowledge and skills, capable of managing precious water resources is crucial to Australia. Managing water resources more sustainably is fundamental to the social-ecological resilience and prosperity of Australia's future.

The Victorian water sector in context

In Victoria, statutory water corporations were established by legislation in 2005 (as State Government owned bodies) for sustainable water, sewerage and wastewater management. Each water corporation has statutory obligations consistent with sustainable management principles entailed in the *Water Industry Act 1994.* Previously, local water authorities,

Local Governments, and water boards delivered these services; organisations with a heritage of compliance-based learning and operations, in which proven technologies and hierarchical business management systems were the norm.

The question of water industry skills and workplace training, sits within a broader social and political landscape of water and natural resources management policy and implementation. There has been much recent debate about government policy settings regarding the sustainability of water supply and demand, particularly in the domain of new infrastructure investment for augmenting Victoria's metropolitan water supplies through the development of a desalination plant, and the question of constructing new reservoirs in river catchments.

Currently, socio-cultural norms are resisting any suggestion to the Victorian community to seriously consider the use of reclaimed, treated and recycled effluent water as an alternative source of potable water supply to meet growing populations and increasing consumer demands. In time, these community attitudes may change, influenced by the impacts of growing water scarcity, prolonged droughts or climate change.

What is evident at this time, is that although statutory water corporations owned by government in Victoria can be constrained by legislative obligations to operate within the current policy settings, the industry itself can find and lead creative innovations that address the multiple dilemmas of water sustainability, climate change and increasing growth of human settlements. When workers' skills and knowledge are enhanced to encompass a greater awareness and understanding of sustainability issues, they can perform at the leading edge of innovation, even influencing

governments' to widen their frame of reference and reconsider policies that support more sustainable infrastructure development and water security.

A current example of an industry lead water sustainability initiative is the Wannon Water Roof Water Harvesting project in southwest Victoria (Wannon Water 2010). In what is believed to be an Australian first, this project will capture roof water from a large new urban sub-division in the regional city of Warrnambool, divert the water in a dedicated second pipe system to an existing storage basin, augmenting normal domestic water supplies by treating the roof water to a potable standard, and returning an amount of water supply equal to an estimated seventy six percent of the domestic water needs of the harvested households in that sub-division area. As well as being a more sustainable augmentation of water supply than constructing new reservoirs or groundwater bores, additional energy and emissions savings will accrue over time from avoided long-distance pumping from remote catchments which would normally be used to supply these homes. This project has originated from water assets planning employees within the corporation and demonstrates the value of fostering skills for thinking critically about more sustainable water infrastructure options. The project has produced a toolkit allowing other water corporations and Local Governments to model the suitability of new urban sub-divisions around Australia with a view to replicating this sustainable water supply option elsewhere, early in the sub-division planning stage. Policy makers and urban planners at the international, national, state and local levels are taking notice. The benefits of enhancing water industry workers' skills for sustainability more widely will no doubt lead to more of this bottom-up innovative approach to urban water management, and is already influencing change.

An applied learning, action learning framework

Basis for applied learning

The Australian Government's Action Plan for Education for Sustainability, *Living Sustainably* (Department of Environment, Heritage and the Arts 2009b, p. 9), outlines seven foundation principles for sustainability education aligning with recognised attributes of applied learning theory. These are

- Transformation and change,
- Education for all and lifelong learning,
- Systems thinking,
- Envisioning a better future,
- Critical thinking and reflection,
- Participation, and
- Partnerships for change.

The Department of Environment, Heritage and the Arts describe the role of education for sustainability as tackling the underlying causes of unsustainable trends and building individual and organisational knowledge, skills, value, capacity and motivation to respond to the complex sustainability issues encountered in their personal and working lives (Department of Environment, Heritage and the Arts 2009b, p. 8).

Continuous learning, adaptive knowledge and skills

Huntington and Tilbury (2006, p. 2) explain that 'Education for Sustainability is an ongoing learning process, actively involving multiple stakeholders in change to achieve sustainability'. Employees, employers, training providers, and teachers of students considering a water sector career,

all benefit from a capacity for recognising, understanding and applying sustainability skills in real-life, practical ways.

This importance of becoming a continuous learner was reiterated by Dewey when he said that "there is an intimate and necessary relation between the processes of actual experience and education" (Dewey 1963, p. 20) and that the "most important attitude that can be formed is that of desire to go on learning" (Dewey 1963, p. 48).

> What he [an individual] has learned in the way of knowledge and skill in one situation becomes an instrument of understanding and dealing effectively with the situations that follow. The process goes on as long as life and learning continue (Dewey 1963, p. 44).

The applied learning, action learning framework proposed integrates adaptive sustainability skills for the new economy within water industry training. Kegan and Lahey suggest we continue using only technical learning designs, expecting them to deliver growth in adaptive capacity for personal and organisational change and learning "[o]ur current designs are not adequate means for promoting the transformational learning that is necessary to meet adaptive challenges" (Kegan & Lahey 2009, p. 310).

> Successful leaders of organisational learning in the future will embrace outcome-driven, rather than course-driven, approaches to adult development…They will prefer programs that "start at transfer" - designs that are rooted within real, intact operational work groups. In these groups the members have a purpose and mission beyond their collective learning, to which that learning is tightly linked (Kegan & Lahey 2009, p. 312).

Organisational learning design

Detailed design of an applied learning, action learning framework, only outlined here, should consider that the water industry in Australia is a complex of many

organisations, with diverse organisational cultures which cannot be treated as a single, homogenous entity. Smith and Sadler-Smith (2006, pp. 5-10) have recognised a spectrum of diversity for learning in organisations, identifying seven key areas of attention in learning design:

- Diversities amongst organisational contexts for Human Resources Development,
- Diversities amongst learning contexts,
- Diversities in learning orientation,
- Diversities amongst learners,
- Diversities of learning methods,
- Diversities in learning supports, and
- Responding to diversity through flexibility.

Accordingly, learning and applying sustainability skills will be diverse at organisational scales, and at personal, interpersonal and team development scales. In addition, Tilbury, Adams & Keogh (2005) identify the need for research and collaboration with industry sectors to determine sustainability best practices, which informs learning design.

An organic process, recognising sustainability skills as continuous learning innovations by industry, acknowledging the benefits of change to the sector, while enhancing personal development of individuals, can be realised through a learning approach which understands 'diffusion of innovations theories' within organisations (Rogers 2003), coupled to experiential, applied learning, and action learning approaches.

Program elements and learning strategies

The learning framework outline being suggested here entails developing the situational elements needed in the industry to implement a workplace curriculum applying a model proposed by Billett (2001, pp. 103-139), tailored to the water sector and specific sustainability skills development.

Billett's model proposes identifying a suite of structured learning activities that gradually move workers or trainees from peripheral or novice participation (activities of low accountability and low complexity, towards full or expert participation (activities of higher accountability and higher complexity), movement from global to local settings, and authentic experiences that build procedural knowledge of industry required workplace performance goals using indirect and direct guidance from more experienced workers (Billett 2001, pp. 105-109). This learning framework can be applied in workplace settings, or modelled in vocational training industry partnerships. Some of the important attributes and elements for incorporating learning for sustainability within such a framework are indicated in the following sections.

Learning for change

The Victorian Government's draft strategy for learning-based change for environmental sustainability, *Learning to Live Sustainably, Victoria's approach to learning-based change for environmental sustainability*, interprets attributes of learning for sustainability as:

> "learning-based change for environmental sustainability" is the development of knowledge, skills, values, attitudes and aspirations leading to changed behaviour in support of environmental sustainability. This includes all the ways in which people learn (Department of Sustainability and Environment 2005, p. 9).

This draft strategy similarly describes attributes for measuring success in learning-based change programs for sustainability education through encouraging applied learning opportunities and experiences that emphasise

> high-level, transformative learning that addresses not only factual knowledge but people's values, skills, attitudes and aspirations – this cannot be achieved simply by information transfer and depends on a rich range of learning experiences including engagement and reflection… (Department of Sustainability and Environment 2005, p. 15).

The applied learning, action learning framework suggested herein fosters transformative adult and student learning in measurable ways for water industry sustainability training.

Learning structures and potential through partnerships

Firstly, development of sustainability skills enhances learners' meta-cognition, exposing them to new ways of knowing and learning through real-life work relevant experiences. Opportunities exist for the applied learning, action learning framework to support beneficial partnerships between existing industry workers' training, and development of new secondary school, TAFE and VET programs.

An example of a learning partnership currently under development in Victoria is the Warrnambool College Sustainable and Emerging Technologies Local Industry Initiative (Warrnambool College 2009). The initiative is an innovative collaboration between the Warrnambool Secondary College and regional industries (including the water industry) for developing an ongoing, two-year VET course and new sustainability curriculum tailored to senior science and technology students. The long-term goals of the initiative are to:

- Collaborate with significant regional industries,
- Provide opportunities for local students to work on industry projects,
- Build capacity of tertiary oriented students in science and technology,
- Promote sustainable practices with future leaders, and
- Encourage and embed creative and critical thinking.

School and water industry partnerships build linkages between senior secondary and TAFE students, work placements and practical skills projects, enhancing diagnostic sustainability skills within new VCAL units on sustainable and emerging technologies.

Secondly, linkages are proposed to university student summer-project water industry internships, TAFE natural resource management and aquatic science courses water industry internships, and formalised industry-based teacher mentoring programs. Finally, through connecting experienced schoolteachers with experienced industry people, to help strengthen action learning strategy elements and improve practical, problem-solving and adaptability skills, as well as new learning and teaching relationships expressed in curricula.

Thirdly, the program integrates formal and informal action learning micro-teaching style classes (Tangen & Mergler 2009) within a "water cadets program". Working closely with industry mentors in structured and unstructured observational roles, industry peer action research discussion groups, and real-life industry sustainability projects, to develop effective social learning and demonstration skills for teachers and learners.

Fourthly, the program aims to better integrate formalised certificate II, III, IV and Diploma courses from national water industry-training packages, by conducting participatory action-learning curriculum development forums, together with experienced water industry representatives meeting to identify industry-wide gaps where common skills for sustainability are applicable, thereby balancing adaptive, theoretical knowledge with skills-based competencies, into a malleable curriculum that meets the needs of water industry organisations.

Approaches to assessment

Approaches to assessment identified preliminarily that suit these applied learning, action learning structures include:

- In-service learning and peer-to-peer project-skills based assessments for existing industry workers,
- Critical thinking, critical reflection action learning workshops held during and post workplace projects with secondary students, teachers and industry mentors,
- Post-microteaching workshop evaluation interviews between learners, teachers and industry mentors, building critical reflection into formative assessments,
- Formal summative assessments and rubrics would support industry certificate and diploma courses, and
- 'Most Significant Change' program evaluation action research at longer-term intervals.

Further action research is required to refine these suggested assessment frameworks, and for developing the learning activity structures mentioned above to suit the different contexts of workplace settings, and in specific industry partnership situations.

Summing up the approach

Expected outcomes and potentials

Integrating sustainability awareness through adaptive, applied learning, action learning approaches, and building relationships between curriculum needs and learning pathways relevant to real-life water industry sector skills and jobs, goes beyond traditional "compliance-driven training" within the water industry. Participants would potentially achieve enhanced employability in the "sustainability economy", developing meta-cognitive skills to better deal with the complexities faced in water industry and do so through critical reflection on unsustainable trends, and becoming motivated to respond to sustainable opportunities.

The learning framework outlined provides a basis for an innovative applied learning, action research project, capable of making a significant, practical contribution to sustainability education in the water industry, learner's personal development and addressing government skills-policy objectives.

This article has outlined a conceptual capacity building, applied learning, action learning framework for integrating adaptive sustainability skills into VET within the Australian water industry-training sector, which has potential to influence bottom-up change in government policy settings for more sustainable water resource management at broader socio-ecological community scales.

Concepts of joining-up pathways for integrating skills for sustainability into the water sector using affective, applied learning and action learning approaches suggested here are innovative for the industry. Certain elements proposed in

this article are underway, such as updating national water training packages. Example linkages within secondary school VCAL courses are in their infancy but hold enormous promise for practical, experiential learning for sustainability in water sector careers.

Further action research for project development is necessary for constructing the details this conceptual outline articulates to realise a practical framework that best meets the needs of stakeholders identified. The starting point would be to convene facilitated discussion workshops between industry stakeholders, educators and researchers to develop a demonstration project.

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Making Sense: Reading and Interpreting Data Through a Reflective Framework
Cathryn Lloyd

This paper stems from my doctoral research and professional practice working with a Women's 'community of practice' Network, within a government agency, in which I designed and facilitated a range of arts-based learning processes for their learning symposium. The arts-based learning strategies are used as 'entry points' (Gardner 2009) for Artful Inquiry and reflection. The data collected originates from the participants' responses to 'catalyst questions' and their reflective stories in relation to their experience of the artful interventions. In addition an existing reflective framework (Hatton and Smith 1995) is re-designed and used for interpreting the types of reflections revealed by members of the Network.

Introduction

This paper is an extract from my doctoral research which is an investigation into Artful Inquiry; an arts-based approach for inquiry, action, learning and reflection that has artful and arts-based learning, facilitation, and reflective practice at its heart. Artful is defined "as a quality of expanded consciousness [and] human potential [that encompasses the] body, mind, heart, and spirit…that evolves through profound personal experiences…often facilitated by artistic processes" (Darsø 2004, p. 18).

Inquiry often requires "non-canonical approaches, such as art, photography, video, theatre, oral history, storytelling, music, dance and other expressive media, to reveal the more

submerged and difficult-to-articulate aspects of the issues involved" (Park, 2006). Artful Inquiry can be "applied…to a range of sectors in society to garner creative and innovative approaches for learning, development, and transformation for individuals and groups of people" (Lloyd 2009, p. 19). Artful Inquiry provides an opportunity for people and organisations to "inquire into some aspect of their work and life" (Reason 1988, p. 4) through artful and arts-based experiences and reflection. Artful Inquiry is not formulaic as every situation is different and every group is different.

This paper stems from my research and involvement with a Women's 'community of practice' Network in which I designed and facilitated a range of arts-based learning processes for their conference. A range of artful processes were incorporated over the life of the learning symposium. The data collected was in response to two particular 'artful interventions' most of the participants engaged in. One process involved the use of photographic images, based on a selection of commercial images as well as my own collection, and the other process was a collaborative artwork in the form of painting. These processes were used as 'entry points' (Gardner 2009) to engage participants in an individual and collaborative inquiry in relation to their learning journey and their understanding of their community of practice.

To get a sense of how the participants felt about their experience and what learning or insights may have resulted from engaging in the arts-based processes, I collected data firstly from an anonymous questionnaire based on three catalyst questions, and secondly from stories generated from email conversations. The catalyst questions included the following:

1. You selected a number of pictures throughout the symposium which represented your journey through

the conference. Tell me about this journey and how helpful the pictures you selected were, or what you got from the use of the pictures you selected.

2. The painting of the network was a major output for the group. Please describe what the process of painting and the actual painting reflect about the network and your engagement with it?

3. Is there anything else in relation to the facilitation and the creative processes that you would like to comment about?

I wondered how I would begin to interpret and make sense and meaning of the responses to the questions recognising that the process of interpreting data is a subjective act as "all findings and interpretations are subjective assessments by the researchers, and that individuals can never be "neutral" or remove themselves from the study to report "objectively" (Creswell 2006, p. 278). In the preliminary scanning of the responses I had a sense that there were a range of reflections occurring from the participants'. This prompted the question "what sort of reflection?" As I mulled that question over I felt that an exploration of what types of reflection were generated from the 'catalyst questions' could be the starting point.

Levels of reflection

Moon (2004, p. 96) refers to the terminology 'levels of reflection' that implies a "hierarchical model of reflective activity" going from being a superficial descriptive reflection to a deeper more profound reflection. The deeper levels of reflection are often referred to as reflexivity, critical reflection or perspective transformation (2004, p. 97) and involves a level of self awareness, and an awareness of the bigger picture in which we are situated, such as historic, cultural

and political beliefs, and values, which implies a level of critical awareness or critical consciousness (Mezirow 1981; Hatton and Smith 1995). For better quality learning and possible transformation to occur regular phases of reflection need to take place both at an individual and group level (Boud, Keogh and Walker 1985; Heron 1985; Moon 2004).

A reflective framework

As I was unable to engage in face-to-face dialogue with the participants after the conference, to hear their story regarding their experience of their involvement in the arts-based processes, I felt I needed to 'unpack' their written responses and make sense of the range of reflections I perceived were being revealed. I began thinking about what sort of approach would be appropriate for interpreting this particular data and what existing models I could draw on for inspiration.

In researching the literature on reflective and experiential learning Moon (2004) refers to Hatton and Smith's (1995) reflective framework as "probably the best-known framework of levels of reflection" (Moon 2004, p. 9). Consequently, I went directly to Hatton and Smith's (1995) work and felt that their model had the potential to assist me in understanding the types of reflections that were occurring. Their framework seemed like a way for me to consider the various stages of reflection a person may go through, particularly when they are not guided through a process of reflection but come at it in their own way after an experience, and in response to a range of catalyst questions. Hatton and Smith (1995) identified four types of reflective writing from their research; "three of which were characterised as different kinds of reflection [and include] descriptive writing, descriptive reflection, dialogic reflection

and critical reflection" (1995, p. 40). The criteria used by Hatton and Smith (1995, p. 48) for recognition of evidence for different types of reflective writing is as follows:

- Descriptive writing: not reflective, description of events that occurred/report of literature; no attempt to provide reasons/justifications for events.

- Descriptive reflection: reflective, not only a description of events but some attempt to provide reason justification for events or actions but in a reportive or descriptive way. Recognition of alternate viewpoints in the research and literature which are reported as either a) reflection based on one perspective/factor as rationale, b) reflection is based on the recognition of multiple factors and perspectives.

- Dialogic Reflection: demonstrates a stepping back from the events/actions leading to a different level of mulling about, discourse with self and exploring the experience, events, and actions using qualities of judgements and possible alternatives for explaining and hypothesising. Such reflection is analytical or/and integrative of factors and perspectives and may recognise inconsistencies in attempting to provide rationales and critiques.

- Critical Reflection: demonstrates awareness that actions and events are not only located in, and explicable by, reference to multiple perspectives but are located in, and influenced by multiple historical and socio-political contexts.

In the context of my research Hatton and Smith's (1995) framework provoked and provided an idea for a methodological approach for interpreting the data I had collected. Gulwadi (2009) used Hatton and Smith's (1995) framework in the context of a sustainable design studio using reflective journals "to develop students' awareness

and understanding of concepts relating to sustainability and sustainable design" (Gulwadi 2009, p. 43). In reading Moon's (2004) and Gulwadi's (2009) subtle interpretations of the framework I reworked Hatton and Smith's (1995) framework to include Moon's (2004) and Gulwadi's (2009) interpretations. However, it seemed to me that the framework still omitted a crucial level of reflection, one that reveals or demonstrates awareness, recognition and understanding of emotion and feeling.

Affective learning and reflection

The literature acknowledges the place that feelings and emotions have in relation to learning and development (Bolton 2005; Boud, Keogh & Walker 1985; Dirkx 2001; Heron 1989; Moon 2004). Boud, Keogh and Walker (1985, p. 29) discuss the idea of 'attending to feelings' and that describing events can bring our attention to an awareness of feelings where emotions and feelings are a "significant source of learning" which can also become barriers. They suggest we need to recognise and understand our emotional responses and either set them aside if the feeling is hindering or disabling learning or retain and enhance the emotions that are useful for learning. However, it is not just about suppressing the 'distorted feelings', they actually need to be 'discharged', 'resolved' or 'transformed' in a way, "that enables us to regain our flexibility and creativity in responding to the current situation" (1985, p. 29) and enable us to continue learning.

Swan and Bailey (2004) observe there has been little discussion, analysis and theory in the literature regarding the association between emotion and reflections and that reflection has been seen as a cognitive process with little attention given to emotions. They note that there has been a

general belief that cognition and rationality are seen as superior to emotions in learning theories and that emotions represent irrationality and are seen as a threat to logical thinking and judgement. Hartog (2002) also notes the emphasis placed on cognitive processes over emotional content in 'management learning' and this belief is often reinforced in "that the workplace is not the place for the expression of the emotional and feeling side of personhood" (2002, p. 235). What is clear is that there is a need for people and organisations to value the emotional as well as the cognitive in learning if people are to get the most from their learning experiences.

As I scanned the data and spent time reading the responses to the catalyst questions I became conscious of not only the levels of reflection Hatton and Smith (1995) describe but the sense of feeling and emotion that emerged. It was apparent that the participants' were revealing an affective reflection and response to their experiences.

In the context of my research feelings and emotions are recognised as a level of reflection and are called 'affective reflection'. 'Affective reflection' draws on Moon's (2004) concept of 'emotional insight' to describe "an emotional experience [that] leads to change in orientation and often change of behaviour [through] the process of reflection and the learning that can emerge from it" (2004, p. 44). It is also refers to Mezirow's (1981) notion of 'affective reflexivity' which is "becoming aware of how we feel about the way we are perceiving, thinking or acting or about our habits of doing so". The inclusion of 'affective reflection' adds to Hatton and Smith's (1995) framework making it a more holistic way in which we can consider and make sense of a persons reflective or reflexive response to their experiences.

Within the context of this research project 'affective reflection' is used to highlight how emotions emerge in and on reflection, and how the participants 'felt' about the creative experiential learning experience. It refers to how the creative process may have been a catalyst for generating the feeling or emotion, or how the process may have helped the participant identify in an affective way what was going on for them, and what if any meaning, insight or learning occurred and was made visible. I am also aware that "other possibilities, interpretations, and ways of explaining things are possible" (Clandinin & Rosiek 2007, p. 46) and it is with 'tentativeness' that I attempt to interpret the experience and reflections of another person. What follows is the re-interpretation and re-design of Hatton and Smith's (1995) reflective framework that I used to consider the responses from the participants.

Re-designing and re-interpreting Hatton and Smith's (1995) reflective framework

The re-interpretation and re-design listed below identifies the existing four levels of reflection identified by Hatton and Smith (1995) and includes a fifth level of reflection 'affective reflection'.

Descriptive is defined as non-reflective as it offers a description of events only; a rote reporting of facts; no discussion beyond description (and in this case descriptive also refers to the description of the image or painting only); no attempt to provide reasons/justification for events.

Descriptive Reflection provides a description of events and some attempt to provide reason justification for events or actions but in a reportive/descriptive way; a recognition/consideration/possibility of alternate

viewpoints; is based on personal perspectives as rationale and recognition of multiple factors and perspectives.

Dialogic Reflection demonstrates a "stepping back" from events and actions; a leading to different levels of mulling about; discourse with self and exploring the experiences, events and actions; use of judgements and possible alternatives for explaining or hypothesizing; different qualities of judgement and alternative explanations may exist for the same material; is analytical and integrative and linking of factors and perspectives; and may reveal or recognise inconsistency.

Affective Reflection reveals/demonstrates an awareness of sensibilities such as emotions/ feelings in self or others; provides an insight or understanding of what might be the cause for/of that emotion or feeling; is aware of the emotion/feeling at the time; or requires a stepping back in order to recall/articulate the emotion/feeling at the time; recognise how they responded to the situation at the time; recognition and awareness of emotion may lead to change/transformation.

Critical Reflection is awareness that action and events are located in and explicable to multiple perspectives but are located in and influenced by historical and socio-political contexts.

Using the re-designed framework to interpret what type of reflection/s each participant reveals is subjective and so the data was read and coded similarly to Hatton and Smith's (1995, p. 41) approach. In the first instance the responses were read by me and the levels of reflection identified. In line with the process as articulated by Hatton and Smith the data was then read and coded by a second coder. Our

coding of the data was compared and discussions took place to resolve where the difference occurred. The five levels were colour coded and match the reflections in the participants' response to the catalyst questions.

My reading and interpretation of the responses to the catalyst questions suggest that the participants revealed a range of reflections or 'multiple perspectives' (Hatton & Smith 1995) when reflecting on their arts-based learning experiences. However, the level of critical reflection was almost nonexistent compared to the other levels. Both the image-based process and the collaborative painting provoked 'affective reflection'. Participants would often begin their reflection in a descriptive way and then move into other levels of reflection. In that sense, the descriptive level is not to be quickly dismissed as it often serves to establish the context or the background in accounting for what happened (Hatton & Smith 1995; Moon 2004). In some ways it sets the scene and can provide a basis for a "change of stance…where further issues and alternative reasons [can] be explored [often] in a more tentative way" (Hatton & Smith 1995, p. 41). In some instances the participants' responses would move directly to an affective or dialogic reflection.

Stories as inquiry and reflection

From the responses to the catalyst questions I was interested in knowing and understanding more about the participants' experiences. Most of the people who attended the conference live in a range of remote locations therefore I emailed those who attended and asked if they would be interested in expanding on and telling me more about their experiences. In doing so the few participants who did correspond revealed more of their story of their experience.

We communicated back and forth a couple of times and what I found from these exchanges was a deeper reflective response. Using the re-designed version of Hatton and Smith's (1995) framework to read and interpret their reflective stories indicated a greater degree of dialogic, affective, and critical reflection.

From their research Hatton and Smith found that engaging in dialogue with another provides "a powerful strategy for fostering reflective action…in a way which encourages talking with, questioning, even confronting, the trusted other…and creates an opportunity for giving voice to one's own thinking while at the same time being heard in a sympathetic but constructively critical way" (1995, p. 41). They also note that "having others…facilitate reflection" (*ibid*) plays an important role. In that sense our email conversations provided a vehicle for further and more critical reflections for the participants.

Our 'dialogue' took place through email conversations and provided further inquiry "focussed on exploration and greater understanding…to create new and greater insight into the situation of interest" (Coffey 2010, p. 164). I was aware of the delicate nature of the exchange (Coffey 2010) and potential 'risk' that these participants may have felt in identifying themselves and therefore the courage they showed in reflecting 'openly and honestly' with me about themselves, to the point that they were prepared to 'question and critique' the artful processes they engaged in. What had initially started as 'anonymous' responses to a questionnaire had moved to a personal and deeper dialogue. The art of engaging in conversation and dialogue with another person is not missed here and I aimed to be respectful, open, and 'listen' to their experiences and stories throughout our exchange. At the same time I facilitated further reflection by

crafting questions or statements that might stimulate new insights and learning for both of us.

So, what to make of this?

To sum up, arts-based learning processes provide 'entry points' for Artful Inquiry, by offering people creative experiences that are catalysts for individual and collective inquiry into an aspect of work or life that can interpreted and reflected on. In doing so the participants', in this case the delegates of the Network, create and make sense of the situation for themselves. In this instance two arts-based processes provided an individual and collective learning experience.

Re-designing Hatton and Smith's (1995) reflective framework provided a way of reading and interpreting the data in a holistic way that includes the 'whole person'. In the first instance (via catalyst questions) participants reflected in a range of ways about their engagement in the artful and arts-based interventions. Many of the reflections revealed an affective response to the experiences. However, the catalyst questions did not provoke or support critical thinking about their learning journey and experiences. Moving into direct interaction and dialogue, where participants were invited to tell more of their story, revealed the capacity for deeper and more critical reflection. This suggests that the learning and reflection acquired through Artful Inquiry can be enhanced through meaningful dialogue with another person. This requires time and trust which in turn provides the opportunity to deepen and expand a reflective and reflexive repertoire which may lead to some sort of transformation.

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We describe action research as a 'family of approaches'… For some, action research is primarily an individual affair through which professionals can address questions such as, 'How can I improve my practice?' For others, action research is strongly rooted in practices of organisation development and improvement… For many in the majority of the world, action research is primarily a liberationist practice aiming to redress imbalances of power and restoring to ordinary people the capacities of self-reliance and the ability to manage their own lives… For some, the key questions are about how to initiate and develop face-to-face inquiry groups, while for others the primary issues are about using action research to create change on a large scale and influence policy decisions (Reason & Bradbury 2006, p. xxii).

As the basis for this article I reflected on how 2010 has extended my 'whanau[1] of approaches' and although we are not quite at the three quarter mark, this year has brought some action research certainties that have been challenged and some certainties that have gotten stronger. And while I'm going to cover only those challenges that have come on a professional, research, work level, as with all matters of

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[1] Maori word for family.

reflection, there are no discrete areas of personal and professional practice. I come to understand more clearly that the 'reflecting waters of Hinekauorohia'[2] will not only uncover what we plan to review, often they cannot help but give back a wide-lens shot that demands more of us than we had expected.

Action research has been described as an uncomfortable space, and it is. But more than this, it is a space of possibilities - it opens up and challenges new and different ways of 'knowing' and 'doing'. Two key projects of mine have centred on action research combined with Kaupapa Maori action research and Australian Indigenous action research. Both projects are designed to address health system inequities of the respective Maori and Aboriginal and Torres Strait Islander populations. I cannot help but draw parallels of sameness between the experiences of both projects, I also cannot help but see some of the distant and very different 'ways' that each of them has in taking their own issues forward. Into these spaces of challenge and doing, the possibilities I have come to understand are magnified and multiplied for *everyone*. Why? Because knowing and doing *is* culturally bound.

Initially I had thought that to make *real* changes that will and can address system inequities, it is to somehow open up mainstream and non-indigenous trained workers to examine and improve *their* practices *with* Maori and Australian indigenous clients. To these ends, action research projects at the first-person level that are focussed and developed around the 'I' and the 'me' and the 'my' of personal and

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[2] When asking my parents *he aha te kupu Maori mo te reflective practitioner?*: what is the Maori word for reflective practitioner, my father started to chant an ancient Maori song that tells of *nga wai whakaata o Hinekauorohia:* the reflecting waters of Hinekauorohia. Resulting from this is, *Nga Wai Whakaata: The Reflective Practitioner* the name given to the immersion early childhood professional development programme developed by the author and the members of her Maitai Team.

choiceful awareness practices is where these examinations and improvements start to happen. Successful action research of this kind, I have seen, steps beyond general 'awareness raising' and begins the unmasking and highlighting of practices of 'expert-I-know-best' domination and oppression. The individual responses of changes to practise, can I know, precipitate collegial and professional and organisational change.   So for the others, the non-indigenous, I had seen most change would come if *they* were to change – and I still do think this, I am just less reliant on them and that, as the *real* way of change. These two projects have cemented this for me.

For both of them the opening up of both sets of indigenous practitioners to independently formalise their own practices of examination and reflection amongst themselves about *their* practices with *their* (indigenous) clients held no surprises. This examination of ourselves with our own was a given. What was the surprise was that from both sides of the Tasman the 'teachings of old' have survived as 'guides' to a myriad of 'ways' for all of us to go forward with.

Ten years into the 21st Century, *yarning circles* of learning and knowing continue to be, *whirly-wind* processes to test our staying power and to filter-in and filter-out 'things' of importance are still meaningful and significant. The teachings of the old people, that ritual and prayer have a necessary and rightful role in our safekeeping today are heard and practised. A person's *wairua*, their spirit, is a precious and real thing. In a similar and different way science has only just caught up with the old people who knew and acted according to the knowledge that *all* objects, both animate and inanimate have a *mauri*, a life-force. Scientists today recognise this and call it a universe made up of matter that is 'living energy'. This is in keeping with hearing that Uluru, once known as Ayers Rock, is alive and

living, and very close to knowing that there is an old Maori *moteatea* or song that tells the *whakapapa* of stone, for stone too has its own genealogy. We learned and heard again and again from each other that if we stop and listen very hard, we will hear the land speak …and she is not happy!

Reason and Bradbury I think, might appreciate that these ancient wisdoms, old practices that have survived because they continue to be relevant to the activities of *all* inquiry, from the past to now, are extensions to their and my whanau of action research approaches. They test us in an age of evidence-based knowledge and technology to accept that knowing comes from many doings and those doings can have happened over many lifetimes before us. They are affirming, sensible and cosmicly sound. The centred-ness that knowledge can give, how certainty and stillness settle when there is rightness and balance in what one knows, these as facts and evidence of the existence of knowledge *don't* qualify in today's everyday as evidence. I am unclear that they ever will or even that they might gather popular appeal as part of a new approach to evidence-based knowledge. It is all too reliant on me and my feelings. That those feelings might be shared and articulated collectively, and a growing collective at that, is still not a valid or reliable confirmation of the existence of that knowledge.

It is precisley this area of knowing and knowledge of 'spirit' and 'mauri' and 'ritual and prayer' that action research has stretched me on. The intangible knowledge of old, that is real and evident to me and others today, are some of the certainties that grow stronger within me, in the face of 'diminishing evidence'[3] that they exist.

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[3] A term frequently used by scientists to also negate 'global warming'.

This leads me to champion the simplicity of action research as what makes it so powerful. To plan, to do the plan, to think-reflect on what's been done and to improve or change are the basis of any action research cycle. Anyone at anytime, can like the *Nike®* ad says, just do it! Of course, inside 'the simplicity' are ethical requirements of praxis that when dealing with people on people issues removes much of what makes anything simple and straightforward. However, in not losing sight of what are really some everyday actions that every person takes in the everyday of their lives, and helping make a discipline of it, action research, as I have seen, can be a critical pathway to self-understanding, self-reliance and the building of resilience.

This happens through *voice*. To inform, to question, to command, to negate, these are what have been described as the key functions of language (Reedy 2010). The ability of individuals to engage in each of these functions is what brings the 'voice' of the individual to be 'found' by the individual and 'heard' by others. Action research in this respect is the vehicle of 'voice'. It is the means through which our 'doing' becomes self-evident and our 'knowing' of ourselves begins to gather shape and understanding *to* ourselves first. Why? Because we are our own first audience – we get heard by ourselves first and that for many is a new experience that action research presents to them.

Statements when people are reviewing their mind-map pictures like, 'I hadn't thought of it like this, but I really do see myself handling issues in this way', and, 'it's not until now that I see, I really *do* do this' are tips of the iceberg of voice. Developing voice to become an integrated practice of the self is the liberationist practice that action research promises and that I am more and more certain is at the heart of its doing.

As with the teachings of the elders, action research in the simplicity of its process and its practices to find and hear 'voice', are within the grasp of anyone at anytime. As a method, and a science, it holds the promise of change and growth for all of us, all the time.

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ALARA individual membership

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- Opportunity to contribute to ALAR journal, with mentoring by the publication team available throughout the process;
- Access to ALAR journal back issues via the website
- Quarterly e-newsletter;
- Discounts at local ALARA events, conferences and world congresses;
- Advance notice via email and post of events and items of interest through the newsletter, website, and ALAR Journal;
- Opportunity to be mentored by other members on the submission of a paper at the Annual National Conference or World Congress;
- Access to the ALARA web site to participate in online discussions, and access the entire membership. Access includes a search engine for members by name, city, state, country and interest;
- Voting rights at the annual AGM or online if unable to attend;
- Opportunity to nominate for a Management Committee position.

The ALARA membership application forms can be found at the back of this journal.

ALARA affiliate membership

ALARA affiliate membership is open to peer professional AL and AR networks and associations. Such organisations share substantially similar goals and objectives in action learning, action research, process management and participatory action research, and actively promote AR and AL through their missions and activities.

The benefits of affiliate membership include:

- The voting rights of a single member through a nominated contact person as identified on membership form.

- Special member discounts to ALARA events, conferences and World Congresses consistent with individual membership discounts.

- Opportunities to sponsor ALARA events such as workshops, conferences and Congresses, and special editions of publications, to mentor ALARA members and be mentored by ALARA members, and gain valuable profile in the professional community.

- One hard copy of the journals and the directory sent to the nominated contact person.

- A web link from the ALARA website <http://www.ALARA.net.au> to the organisations website if available. The member writes their own descriptive paragraph to go with the link.

- Notifications by email from ALARA about events or activities or resources

- Online access to ALARA's considerable professional development resources.

- Receipt and contribution to ALARA's newsletters.

- Access to ALARA's members for professional development and other delivery of AL and AR services as agreed.

- Discounted individual membership of ALARA. Individuals within organisational members can join as full members of ALARA at 50% of the normal fee. All individual members who take up this option are entitled to the same benefits as full fee paying individual

members, with the exception that voting rights fall to the nominated contact person.

ALARA organisational membership

ALARA offers three categories of organisational membership: Corporate, Professional and SME (small to medium enterprise).

- Corporate membership is open to any business or organisation that employs more than 200 staff and has a demonstrated commitment to supporting the development and application of AR/PAR/AL practice.

- Professional membership is open to any allied professional organisation that support ALARA's objectives without necessarily themselves having comparable objectives e.g. a professional association in a specific discipline or a university department.

- An SME membership is open to any small to medium sized enterprise that employs 200 or less staff and has a demonstrated commitment to supporting the development and application of AR/PAR/AL practice.

The benefits of organisational membership include:

- The voting rights of a single member through a nominated representative as identified on registration form.

- Special member discounts to ALARA events, conferences and World Congresses consistent with individual membership discounts.

- 3 Opportunities to sponsor ALARA events such as workshops, conferences and Congresses, and special editions of publications, to mentor ALARA members and be mentored by ALARA members, and gain valuable profile in the professional community.

- One hard copy of the journals and the directory sent to the nominated representative.

- A web link from the ALARA website <http://www.ALARA.net.au> to the organisations website if available. The member writes their own descriptive paragraph to go with the link.

- Notifications by email from ALARA about events or activities or resources

- Online access to ALARA's considerable professional development resources.

- Receipt and contribution to ALARA's newsletters.

- Access to ALARA's members for professional development and other delivery of AL and AR services.

- Discounted individual membership of ALARA. Individuals within organisational members can join as full members of ALARA at 50% of the normal fee. All individual members who take up this option are entitled to the same benefits as full fee paying individual members, with the exception that voting rights fall to the nominated individual.

- If 10 or more individuals from an organisation join ALARA at the time of organisational membership registration, the organisational membership is free of charge.

JOURNAL SUBMISSIONS CRITERIA AND REVIEWING PROCESS

The Action Learning Action Research Journal (ALARj) contains substantial articles, project reports, information about activities, reflections on seminars and conferences, short articles related to the theory and practice of action learning, action research and process management, and reviews of recent publications. It aims to be highly accessible for both readers and contributors. It is particularly accessible to practitioners.

Please send all contributions in Microsoft Word (.doc or .rtf) format by email (not a disk) to **alar@alara.net.au**

Guidelines

ALARj is a journal (provided in PDF, with hard copies available) devoted to the communication of the theory and practice of action research and related methodologies generally. As with all ALARA activities, all streams of work are welcome in the journal including:

- action research
- action learning
- participatory action research
- systems thinking
- inquiry process-facilitation, and
- process management

and all the associated constructivist methods such as:

- rural self-appraisal
- auto-ethnography
- appreciative inquiry
- most significant change
- open space technology, etc.

Article preparation

New and first-time contributors are particularly encouraged to submit articles. A short piece (approx 500 words) can be emailed to the Editor, outlining your submission, with a view to developing a full article through a mentoring process. One of our reviewers will be invited to work with you to shape your article.

Journal articles may use either Australian/UK or USA spelling and should use Harvard style referencing. Visit http://en.wikipedia.org/wiki/Harvard_style_(referencing) for more.

Requirements

Written contributions should contain:

- 1 ½ or double-spacing in all manuscripts, including references, notes, abstracts, quotations, figures and tables
- double quotation marks within single quotation marks to set off material that in the original source was enclosed in single quotation marks. Do not use quotation marks to enclose block quotations (any quotations of 40 or more words) and italicise block quotations
- Harvard style referencing
- maximum of 8000 words for peer reviewed articles and 2000 words for other journal items (including tables and figures)
- an abstract of 100-150 words
- six keywords for inclusion in metadata fields
- minimal use of headings (up to three is OK)
- any images or diagrams should be used to add value to the article and be independent from the document as either jpegs or gifs and inserted as image files into the page where possible. If using MS Word drawing tools, please 'group' your diagrams and images and anchor them to the page, or attach at the end of the document with a note in-text as to its position in the article.

- Please note: if you are using photos of others you must have them give permission for the photos to be published. You should have written permission in these instances and forward such permission to the Editor.

On a cover sheet, please include contact information including full name, affiliation, email address, small photo (.jpeg or .gif) and brief biographical note.

- Please note: all correspondence will be directed to the lead author unless otherwise requested.

Peer review contributions

All contributions for review should fit the following structure (only include those sections that are appropriate to your article):

- Title (concise and extended as required)
- Abstract and Keywords (100-150 words)
- Body of article – eg. introduction, background, literature review, main argument or research question, research methodology, research results, discussion, conclusions and future work (see formatting template)
- Useful links (if referring to weblinks, include these in full)
- Acknowledgements (about 100 words)
- Reference list (Harvard style)
- Appendices (use sparingly)
- Biographical notes of authors (up to 50 words)
- *Optional* small photo image of author(s) (.jpeg/.jpg - no larger than 150 pixels)
- Please note: Those preferring a full peer review, must indicate as much to the editor at the commencement of writing, by email.

Editorial team

ALARj is supported by a team of reviewers and is jointly published by ALARA Inc and Interchange and Prosperity Press. The ALARj publication is supported by the ALARA Publications Working Group, a team of ALARA members who share an interest in the development and progress of the journal and other ALARA publications.

Journal article review criteria

The following criteria will be used by the Editorial review team to identify and manage the expectations of articles submitted for inclusion in the ALARj.

Articles submitted for inclusion in the journal should maintain an emphasis and focus of action research and action learning in such a way that promotes AR and AL as supported by ALARA members, and contributes to the literature more broadly.

Authors are sent a summary of reviewers' comments with which to refine their article.

The criteria are that articles submitted for inclusion in the ALARj:

- be both aimed at and grounded in the world of practice;
- be explicitly and actively participative: research with, for and by people rather than on people;
- draw on a wide range of ways of knowing (including intuitive, experiential, presentational as well as conceptual) and link these appropriately to form theory;
- address questions that are of significance to the flourishing of human community and the more-than-human world;
- aim to leave some lasting capacity amongst those involved, encompassing first, second and third person perspectives; and
- critically communicate the inquiry process instead of just presenting its results, and some reflections on it.

These overarching criteria should be considered together with the following questions:

- Is the article logical?

- Is it based on evidence? If so what kind?

- Does the article consider ethics?

- Has it considered the viewpoints of many stakeholders? Is it dialectical?

- Does the article consider the consequences for this generation and the next?

- Does it illustrate good practice in AR and AL?

- Does it progress AR and AL in the field (research, community, business, education or otherwise)?

- Does the writer present ideas with flare and creativity?

- Would the writer benefit from some mentoring to produce an article of journal-standard?

Upon final submission, authors are asked to sign an Agreement to Publish. For this, and more information about ALARA's publications, please visit http://www.alara.net.au/publications.

For more information about ALARA and its activities please contact us on:

ALARA Inc
PO Box 1748
Toowong Qld 4066
Australia

Email: admin@alara.net.au
Fax: +61-7-3342-1669

INDIVIDUAL MEMBERSHIP FORM

This form is for the use of individuals who are NOT part of an Affiliate or Organisational membership. Please complete all fields.

I wish to apply for Individual Membership of ALARA

Name		
Title	*First name*	*Surname*

Street address	Town / City

Postcode / Zip	State	Country

Phone	Mobile

Email

Are you eligible for a concessional membership fee? If you are a student, pensioner or individual earning less than $20,000AUD per annum then you can apply for the concessional membership fee.

Membership Fees

$145.00 AUD	Full membership fee
$ 95.00 AUD	Concessional membership fee (see above)

We offer a range of payment options. Details will be provided on the Tax Invoice that we will send to you on receipt of your membership application.

Remember if you want to join and pay online, just go to http://www.alara.net.au/alara_payments

Otherwise, please return the completed form to us and we will send a welcome pack with everything you need to know about how to get the most out of your membership:

BY POST TO:

Administration, ALARA Inc.
PO Box 1748 Toowong
QLD Australia, 4066

BY FAX TO: +61 7 3342 1669
BY EMAIL TO: admin@alara.net.au

ORGANISATIONAL MEMBERSHIP FORM

We wish to apply for organisational membership of the Action Learning, Action Research Association Inc.

NAME of organisation...		ABN
Street address		Town/City
Postcode/Zip:	State	Country
Phone:		Incorporated? ❑ Yes ❑ No
WEB LINK	Your web address:	

NOMINATED CONTACT PERSON and ORGANISATION'S VOTING REPRESENTATIVE

Name	Position
Postal Address	Phone
	Mobile
	Email

Is your organisation a sub-group of an already registered ALARA Organisational Member? (e.g. are you a research centre at an already registered university, an agency of an already registered government department) If your organisation is a sub-group of an already registered organisational member, your membership fee is waived and your organisation still enjoys the benefits of organisational membership.	❑ Yes ❑ No ❑ Don't know

DESCRIPTION of your organisation...

ORGANISATION CATEGORY & ANNUAL FEES

❑ Corporate	❑ Professional	❑ SME
(Any business or organisation that employs more than 200 staff and has a demonstrated commitment to supporting the development of the AR/PAR/AL practice)	(Any allied professional organisation that supports ALARA's objectives e.g. a professional association or university. Note that this excludes Affiliate Organisations with which ALARA shares reciprocal membership)	(Any business or organisation that employs 200 or fewer staff and has a demonstrated commitment to supporting the development of the AR/PAR/AL practice)
$AU500.00 (Inc GST if applicable)	**$AU350.00** (Inc GST if applicable)	**$AU200.00** (Inc GST if applicable)

Australian Goods and Services Tax (GST) is charged to Australian organisations according to the requirements of the Australian Taxation Office.

PAYMENT DETAILS

We offer a range of payment options. Details will be provided on the Tax Invoice that we will send to you on receipt of your membership application.

Remember if you want to join and pay online, just go to http://www.alara.net.au/alara_payments

Please return the completed form to:

BY POST TO:

> Administration, ALARA Inc.
> PO Box 1748 Toowong
> QLD Australia, 4066

BY FAX TO: +61 7 3342 1669
BY EMAIL TO: admin@alara.net.au

AFFILIATE MEMBERSHIP FORM

We wish to apply for organisational membership of the Action Learning, Action Research Association Inc.

NAME of organisation...		ABN
Street address		Town/City
Postcode/Zip:	State	Country
Phone:		Incorporated? ❑ Yes ❑ No
WEB LINK	Your web address:	

NOMINATED CONTACT PERSON and ORGANISATION'S VOTING REPRESENTATIVE

Name	Position
Postal Address	Phone
	Mobile
	Email

Is your organisation a sub-group of an already registered ALARA Affiliate Member?	❑ Yes ❑ No ❑ Don't know

DESCRIPTION of your organisation...

When we receive your form, one of our members will be in touch to explore reciprocal fee arrangements.

Please return the completed form to:

BY POST TO:

Administration, ALARA Inc.

PO Box 1748 Toowong

QLD Australia, 4066

BY FAX TO: +61 7 3342 1669

BY EMAIL TO: admin@alara.net.au