8th World Congress 2010
Participatory Action Research and Action Learning 6th - 9th September, Melbourne, Australia

A philosophical framework for good research: Action Research or Science

Dr Pam Swepson
www.swepson.com.au

BIOGRAPHY

Dr Pam Swepson is an organisational psychologist with 25 years of experience working with leaders in both government and corporate sections as their leadership coach and to assist them to develop their teams and their organisations. Her PhD was on the philosophy and practice of action research. Contact at www.swepson.com.au

ABSTRACT

To improve my own practice as an organisational consultant and to help me implement my values of democracy and participation in the workplace, I undertook a study of Action Research. I did this by comparing the philosophies and practice of action research with the philosophies and practice of applied science. To my surprise, I discovered more similarities than differences. This led me to develop a philosophical framework for good research (Swepson, 2003) that:

- provided me with a basis for collaboration between action researchers and scientists
- suggested 3 philosophical questions for critiquing my own methodology.
- provided me with some alternative ways for improving my own practice/methodology. (Swepson 2001)

You might find my framework useful too.

I. PART 1: MY STORY AND MY LEARNING

A. What I did

As a management consultant, dedicated to the values of democracy and participation in the workplace, I discovered action research as a way to plan and evaluate my practice. However, I did not find the literature at the time very helpful on exactly HOW to do that. So, for a PhD, I conducted some action research on how to do action research by comparing it with something it was not; ie scientific method. My action research methodology was a cyclic process of comparing the literature of the philosophy of science, mostly the work of Sir Karl Popper, (Magee 1975), with the practice of science (a group of well regarded applied agricultural scientists) though comparative case studies and comparative group discussions with the literature of action research, mostly through the philosophy of Critical Theory of Jurgen Habermas, (McCarthy 1978) and the practice of well regarded action researchers through comparative case studies and comparative group discussions.

B. What I learned:

1. **Doing participatory research is not easy and AR theory does not help much!** I unilaterally decided that my two research groups – action researchers and scientists – would be participatory – because that was what the literature prescribed. While both groups enjoyed the process and got a lot from it – each

group ‘rebelled’ against me – but for different reasons. The action researchers said ‘If this is participatory research, how come you are making all the decisions?’ When I accepted that challenge and attempted to delegate decision making AND responsibility to the group, no one wanted to participate! The scientists said ‘We have no interest in making any decisions. We just want to be part of your ‘methods and materials’. The ‘culture’ of these scientists is to help each other, but not take responsibility for others’ research.

Learning: The AR methodology I attempted to implement was not inherently participatory; ie it gave me no rigorous way to engage with my participants in order to decide who makes what decisions about what and when. To do so, I would have needed to bring in appropriate engagement, participation, communication and facilitation methods from elsewhere. Which I now do.

2. **AR and applied science: more similarities than differences.** My comparison of the philosophy and practice of AR with the philosophy and practice of applied science threw up more similarities than differences!

- Both are data driven methodologies - rather than being theory driven. Swepson 1998) The ag scientist in my study were applied researchers – trying to find scientific answers to problems in the paddock/field rather than the lab. This means they have to deal with a lot of variables, both social and technical: too many to only apply a straight forward experimental design. Or they are researching very complex systems like climate and the environment - again with too many variables for experimental design. Consequently, their research is data, rather than theory driven and their methodology emerges to address the data. This is very similar to action researchers trying to find answers/solutions to real world social problems; ie ask a reasonable question, collect data, re-define the question and research method in the light of the data you collect, etc. Both AR and applied science are data-driven methods of enquiry designed to ‘fit the function’(Dewey 1966) or solve the problem .
- Both action researchers and applied science – who search for useful results – can come into conflict with peers who search for ‘truth’. Data driven methodologies are at odds with prescriptive theories of research of either science or action research. Consequently applied scientists and action researchers can both be criticised by their theory-driven colleagues for doing ‘sloppy’ research rather than sticking to a prescriped method. To understand these differences between theory driven research and data driven research, I critiqued the philosophies of science and the Critical Theory philosophy of action research. It seemed to me that in both cases, the philosophies were seeking methods that would secure ‘true and certain knowledge’; hence they prescribe imperatives for achieving that; ie ‘objectivity’ is prescribed in science and ‘participation’ is prescribed in AR. However, the philosophies themselves do not provide methods for doing so. The philosophical sceptics and pragmatists (Dewey 1966) on the other hand argue persuasively that ‘truth’ is probably unattainable, but ‘useful’ knowledge is achievable and probably preferable.
- Science can be participatory too. It seems to me that all research: science or action research: happens within a social system. Mostly action researchers work on social problems and scientists work on more technical problems or more likely, socio-technical problems. Key stakeholders in all instances can include funders, collaborators, publishers and end users. Scientists are both obliged to and intuitively use methods of participation to increase the support and reduce the resistance of all stakeholders. Ag scientists are likely to be reasonably systematic in their participation methods if they have experience or access to agricultural extension skills whose methods for participation can be more sophisticated than some other action

researchers.

3. **Collaborative research: AR and science.** With more similarities than difference between action research and applied science, I developed some criteria of 'good research' that would form the basis of how I evaluated my own research practice (see below) AND provide the basis of collaboration and learning between applied scientists and action researchers. For example, in 1998, an entomologist colleague and I conducted a piece of 'Participatory ag science' on behalf of the Queensland Fruit and Vegetable Growers' Association into the likely impact and management of a looming insect pest. Our co-researchers were about 12 relevant scientists and 12 fruit and vegetable growers. Our final report was technically sound, socially practical and supported by both scientists and growers, who all commented on the effectiveness of our participatory research methodology. (White 1998)

What we learned from each other: I learned the value of the literature. My colleague made much more extensive use of it than I would have at that time. He learned that a carefully designed and implemented participation process enhanced the technical quality of the work and the likely implementation. We produced a better piece of work for our client than either of us could have done alone.

II. PART 2: A PHILOSOPHICAL FRAMEWORK FOR GOOD RESEARCH

This framework has:

- provided me with a basis for collaboration between action researchers and scientists
- provided me with 3 philosophical questions for critiquing my own methodology. Socrates said that it is the responsibility of philosophy to question answers rather than answer questions.
- provided me with some alternative ways for improving my practice. William James said: "Philosophic study means the habit of always seeing an alternative." My framework helps me to find alternative ways to improve my practice.

You might find my framework useful too.

<u>My assumptions about good research</u>

All good research aims to improve the human condition and add to the body of knowledge.

All research happens within a social system.

All good research aims to answer 3 main philosophical questions:

- (Axiology) What is good? There are 3 main ways of answering this question: (Honer 1992)
  - Relative – mostly people in my group think so
  - Utilitarian – it works in practice
  - Absolute – it is a law or truth.
- Epistemology: How do we know what we know? There are 2 main ways of answering that question:
  - Empirically – We create knowledge inductively, by accumulating and collating information from what we observe
  - Rationally – We create knowledge deductively by testing ideas/theories that we can conceive in our minds in the real world.
- Ontology: What is real? There are 2 main ways of answering that question:
  - The material world that we access through our 5 senses.

- The immaterial world of thoughts and feelings.

To my mind, rigorous research is that which implements responses to the 3 philosophical questions with sound methods; ie it 'fits the function' (Dewey 1966).

How you might use the framework

- See what you can learn about good research that is relevant to action research from scientific method – or vice versa.
- It is not a matter of 'ticking all the boxes' but of noting which ones you tick and which ones you don't and asking yourself WHY or WHY NOT?

How scientific method attempts to address those questions:

	Research aims/ planning choices	**Methodological choices**	**Evaluation choices**
Axiology – What is Good? Relativism, Utilitarianism, Absolutism	To improve the human condition and add to the body of knowledge On a continuum from basic to applied research – add to the body of knowledge and adopted in practice. Relative good – supports commonly held theories Utilitarian good - make a difference in the world – can predict/explain – is adopted 'Absolute' good – generalised or true knowledge	Relative Supports currently theory – Conduct preliminary lit review Utilitarian – Use participatory methods to increase relevance adoption/acceptance and decrease resistance. Which stakeholders?: funders, end-users, collaborators/colleagues How? As data providers and/or interpreters, planners and decisions makers and/or implementers? What engagement, participation, communication, facilitation, evaluation methods? When? Absolute – experimental design to find new facts, create new theory	Peer reviewed publications - colleagues Project presentations and Milestone reviews - (funders) Adoption by End users
Epistemology How do we know what we know? Empiricism (data driven) or rationalism (theory driven)?	Either : Problem or key variables of it can be isolated and compared with each other. Or Problem too complex to identify key variables and no current theory fits all the variables. (Climate, environment)	Rationalism: Theory driven research - usually experimentation to deduce statistical probability or relationship of variables. Empiricism: Data driven – ask fuzzy question using fuzzy methods – inductive reasoning (collection of observational data, compare with theory/literature, more precise data collection etc), leads to sharper question and sharper methods and an emergent theory. Separation of research from implementation to ensure validity of research data. Long cycle evaluation – the next experiment.	Rationalism – Null hypothesis is statistically disconfirmed Empiricism - Theory which best fits the data -survives critical tests to disconfirm.
Ontology What is real? Ie data sources Materialism (includes unconscious human actions) Non-materialism– thoughts and feelings	Materialism - Evidence of the 5 senses of the material reality Non-materialism: Needs (thoughts and feelings) of stakeholders: funders, end-users, collaborators and the researcher.	Evidence of the 5 senses - observations Evidence of thoughts and feelings – consultations, interviews, surveys (problem identify and feedback) etc Researcher aims to maintain independence from the data/problem	Validity of material and immaterial data – triangulation or multiple data sources Reliability of theory – how transparent and/or multiple analysis/interpretation processes. Might trade-off some validity for reliability (generalisablity)

How action research attempts to address those questions:

	Research aims/planning choices	**Methodological choices**	**Evaluation choices**
Axiology – What is Good? Relativism, Utilitarianism, Absolutism	Improves the human condition and adds to the body of knowledge Relative good – satisfies local community needs Utilitarian good – improves a local situation Absolute good – adds to action research or other theory/body of knowledge	Relative good – local problem definition process Utilitarian – Use participatory methods to increase relevance, adoption/acceptance and decrease resistance. Which stakeholders?: funders, end-users, collaborators/colleagues How? As data providers and/or interpreters, planners and decisions makers and/or implementers? What engagement, participation, communication, facilitation, evaluation methods? When? Absolute good Create new theories of action research through continuous critical reflection on content and method and assumptions	Measures/indicators of community satisfaction Measures/indictors of improvement to the situation. Publication of 'research' outcomes/theories on action research or other philosophies/methodologies.
Epistemology How do we know what we know? Empiricism (data driven) or rationalism (theory driven)?	Mostly: Problem too complex to identify key variables and no current theory fits all the variables eg social justice Theory driven action research: implementing a prescribed method of action research – leads to problems.	Empiricism: Data driven – ask fuzzy question using fuzzy methods – inductive reasoning (collection of observational or interview/survey data, compare with theory/literature, more precise data collection, grounded theory for analysis etc) - leads to sharper question and sharper methods and an emergent theory. Short-cycles/spirals alternating between action, critical reflection and research to test the validity of the data and to refine the research question and method.	Empiricism - Theory which best fits the data – survives critical methods to disconfirm
Ontology What is real? Ie data sources Materialism (includes unconscious human actions) Non-materialism– thoughts and feelings.	Materialism - Evidence of the 5 senses of the material reality Idealism - Needs (thoughts and feelings) of stakeholders: funders, end-users, collaborators and the researcher.	Evidence of the 5 senses - observations Evidence of thoughts and feelings – consultations, interviews, surveys (problem identify and feedback) etc Self disclosure of the researcher.	Validity of material and immaterial data – triangulation or multiple data sources Might trade-off some reliability (generalisability) for validity.

How I try to improve my action research practice:

1. Include explicit methods for participation; eg stakeholder selection and engagement, role clarification, communication and joint decision making.
2. Include explicit methods for critical reflection and data analysis for emergent theory generation; eg grounded theory.

3. Produce publications/contributions to the theory, philosophy and methodologies of action research; ie this paper.

4. Make greater use of the action research literature as an alternative data source.

How might you improve your action research?

REFERENCES

Dewey, J (1966) Logic: The Theory of Inquiry New York Henry Holt and Co

Honer, S.M, Hunt, T.C, Okholm, D.L. (1992) Invitation to Philosophy: Issues and Options 6th edition Wadsworth Publishing Company California USA.

Magee, B (1975) Popper Fontana/Collins

McCarthy, T. (1978) The Critical Theory of Jurgen Habermas Polity Press Cambridge, UK.

Rorty, R (1987) Pragmatism and Philosophy in Philosophy: End or Transformation? Ed by Baynes, K, Bohman, McCarthy, T. The MIT Press, Cambridge Massachusetts, USA.

Swepson, P.J.(2003) Some common ground that can provide a basis for collaboration between action researchers and scientists: a philosophical case that works in practice. Systemic Practice and Action Research, Vol 16, No 2, April 2003.

P. Swepson (2001) Action Research as Systematic Inquiry in Effective Change Management Using Action Learning and Action Research: Concepts, Frameworks, Processes, Applications. S.Sankaran, B.Dick, R. Passfield, P.Swepson (eds) Southern Cross University Press.

Swepson, P.J. (1998) Separating the ideals of research from the methodology of research, either action research or science, can lead to better research. In Action Research International, Paper 1 Available at www.scu.edu.au/schools/gcm/ar/ari/p-swepson98

White, G.G. Swepson, P.J. and Tyas, J.A. (1998) Silverleaf whitefly research and management strategy for Queensland horticulture. Cooperative Research Centre for Tropical Pest Management, Brisbane.