

Resource

Practitioner Action Research



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The Institute for Adult Learning (IAL) aims to contribute to the competitiveness of Singapore by developing an effective, innovative and responsive Continuing Education and Training (CET) sector that is able to meet the needs of industries and the workforce. It achieves this by raising capabilities, catalysing innovation, and leading research in workforce learning.

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Dr Helen Bound is a Principal Research Fellow with the Institute for Adult Learning where she heads the Centre for Research in Learning (CRIL). She has a background in vocational training and education, having coordinated the Bachelor of Adult and Vocational Education at the University of Tasmania. Her research work focuses on learning across a wide variety of contexts, including workplace learning, e-learning, professional learning and learning through collaborative activity. She has published on a range of topics including professional development of vocational teachers, workplace learning, online learning and the development of research instruments.

These resources were prepared to supplement the Tools for Learning Design Research Project, 2011.

Practitioner Action Research: What is it?

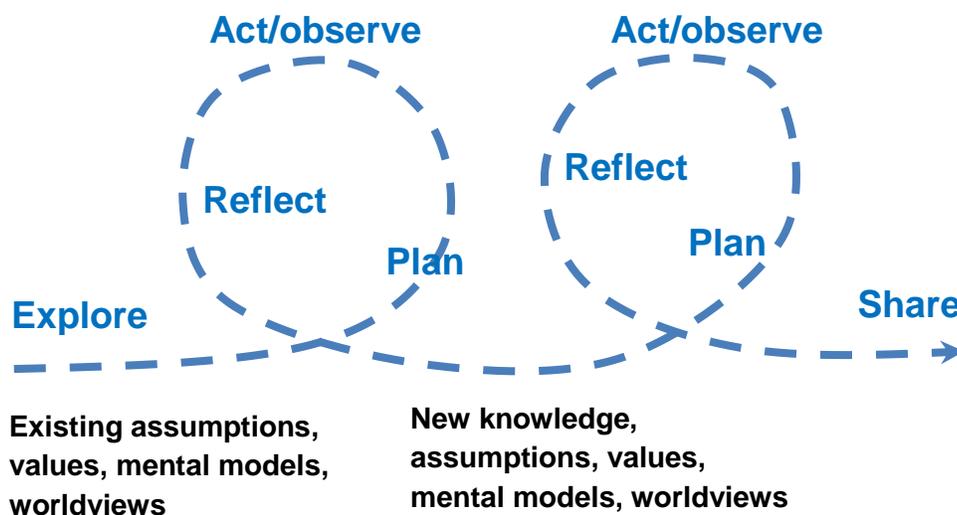
Practitioner action research, like any other type of research means different things to different people. However it is generally agreed that action research is about addressing a particular problem or a specific practical issue (Creswell, 2005, p.550) within one's own workplace. It is therefore about change for those involved; change of practice and often change of one's theories of learning, underpinning beliefs and values.

Action research as we will use it is a highly collaborative process involving lots of discussion and sharing to enable us all to learn from each other's experiences, thoughts, questions, ponderings, and ideas. Action research is usually done in cycles, enabling incremental change.

We will consider two approaches to action research:

1. **Plan, act, reflect** – suitable for those who are able to make changes to their practice immediately, or who are more active experimenters who learn from doing and seeing what arises.
2. **Design study to collect data to inform change** – suitable for those who might not be able to make changes to their current practice immediately, or who are more reflective learners and like to see the whole before making changes.

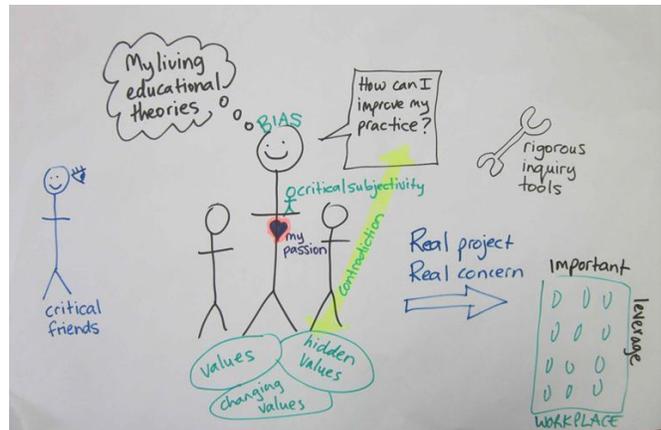
Plan, Act, Reflect



Whitehead and McNiff (2006) suggest that teachers start with a disorienting dilemma that they want to explore. In the process of wrangling with such a dilemma they create “living educational theories” – these are contingent, being constantly perturbed, filling a need to understand. These theories cannot be reduced to a set of inter-connected propositions because the meaning lies in the living contradiction of the “I”.

“The creation of living theories begins in practice. The creation begins in the kind of inquiries which I think you will have engaged in of the kind, “How do I do this better?” or “How can I help you to improve your learning?” or “How can I live my values more fully in what I am doing?” In the process of answering such questions, the action researchers find it helpful to use professional learning or action/reflection cycles of:

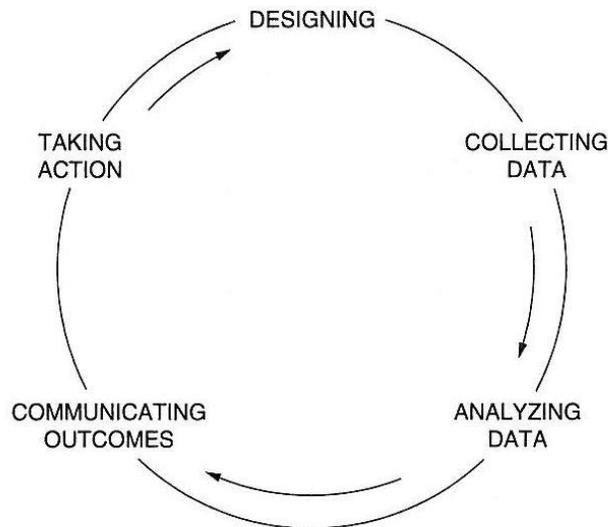
- **expressing concerns** when values are not lived fully in practice
- **constructing action plans** with details of the data to be collected to enable a judgement to be made on the effectiveness of the actions



- **acting and data gathering**
- **evaluating** in terms of understanding, and the effectiveness of the actions
- **modifying** concerns, plans and actions in the light of the evaluations.”

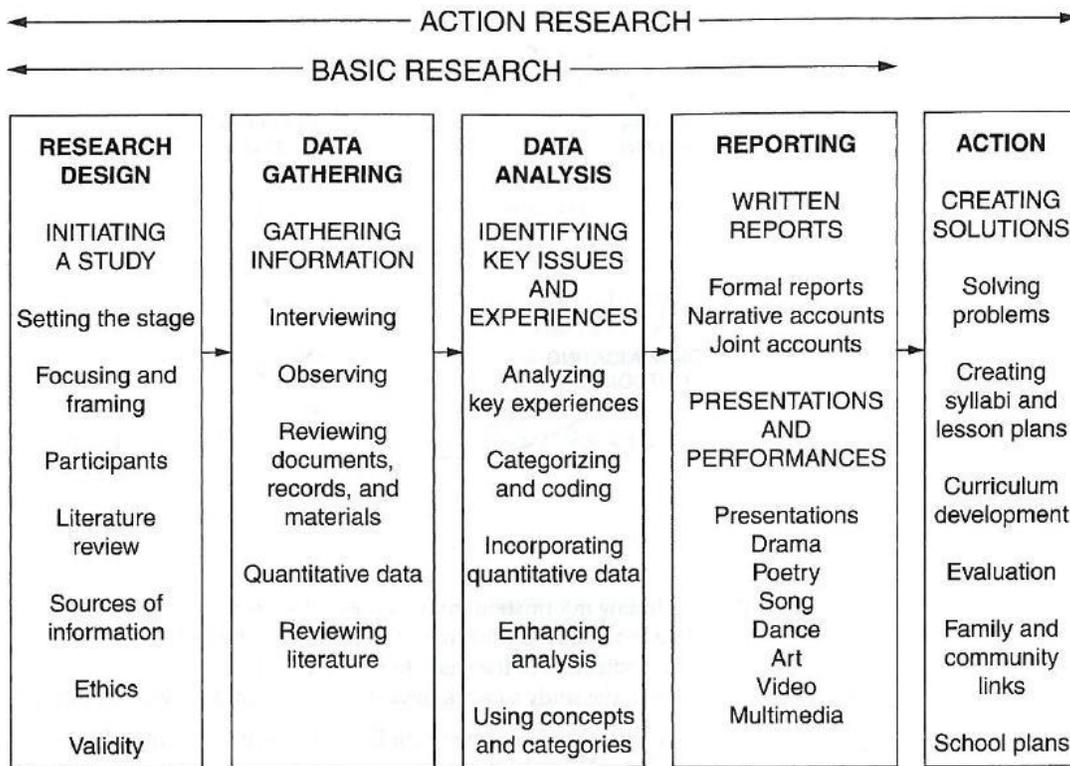
Design study to collect data to inform change

The following diagram is a useful explanation of the second action research process.



From: Stringer (2008, p.5)

In the table below, Stringer, (2008, p.6) has provided some detail about what happens at each stage.



Impact of action research on ourselves

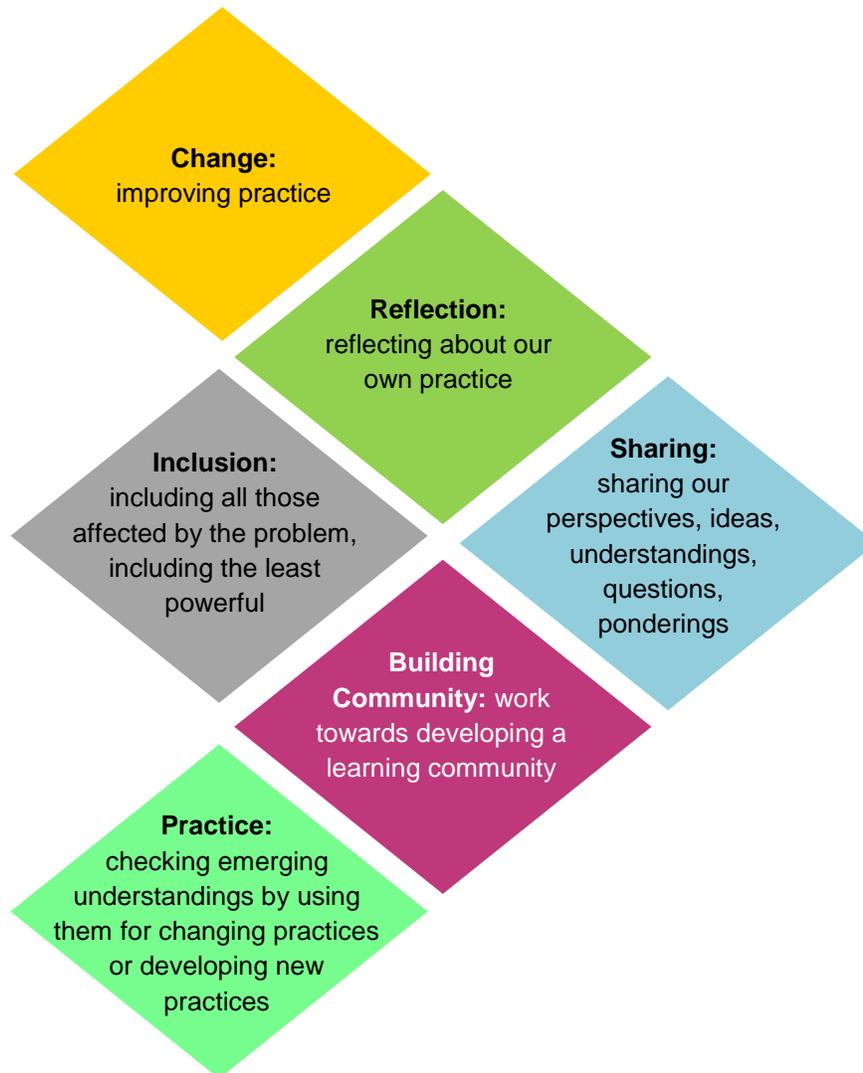
Kemmis (2009, p.463) describes action research as:

A critical and self-critical process, it “urges” changes in practices, understandings and conditions of practice. Action research means changing what we do; transforms our understandings and therefore what we think and say and transforms the conditions of practice and thus how we relate to others and to things and circumstances around us.

Therefore it is not surprising that being involved in action research provides a means for understanding what we “know” in a different light. As a result we can lose our way, flounder, feel uncertain, not know what to do next. Discussion and sharing is important to enable us to work through these moments, because the possible answers are many.

Action research orientations

The action research orientation we will adopt has the following characteristics:



Judging the rigour of action research

Action research/lived experience studies are usually judged on how systematic was the research, the level of critical inquiry and reflection brought by the researcher, evidence for any claims and a transparency about the values one is bringing in making those claims, and contextualising within current educational theories and frameworks (Whitehead, 1998).

Case Study: How I do action research – Dr Sue Stack

I have been doing action research for many years both in personal exploration of my own practice, and in collaborative research with other teachers. I use iterative *plan, act, reflect* cycles. The first *plan, act, reflect* cycles usually involve simple data gathering and interpretation, resulting in refining the questions and the actions, leading to more in-depth data collection and reflection in subsequent cycles. Usually when implementing a new action it is difficult to ensure everything works well, but often, unexpected consequences can lead to interesting insights.

Some of the processes I use for collaborative action research projects:

1. Plan – set up the project

- **recruit** the key stakeholders, participants, mentors/critical friends or reference group in the project
- **explore** – determine what is happening now (getting data if necessary), reviewing documentation, consider relevant theory or literature, invite perspectives of “experts”, honing in on what is problematic (disorienting dilemma)
- **connect to participants** – this may involve exploring some personal values, purposes and assumptions; understanding and caring for personal feelings; focusing on where the expertise; passion and vision is; eliciting ethical commitment; tuning into where there is a sense of discomfort or being on learning edge and naming these; naming the constraints that are visible
- **frame up question** – consider an overarching question and smaller practical or personal ones.

Plan action/intervention – based on one’s research question determine experimental action and the roles/orientations that one wants to take.

Plan data collection – What data will we collect, what is it likely to tell us, how might we analyse it, what is its validity, what ethics approval do we need? Consider the lenses of students, colleagues, self, theory and data to ensure different perspectives. Consider the importance of capturing:

- **inner** intentions, beliefs, assumptions, values, emotions
- **external** behaviours and products
- **inter-subjective** meanings people are making, relationships and cultures, worldviews and norms
- **inter-objective** political, organisational and social structures processes and systems.

Consider encouraging students to be actively interested in the research,

encouraging feedback and co-theorising.

2. Act and observe – do it – use inquiry in action during the experimentation – mindfulness. Set up ways of collecting data during and after – consider drawing from student work, colleague observers, colleague team-teachers, video-audio of the event, surveys, interviews, focus group discussions, personal observations captured after the event in descriptive writing, field notes, or mind-maps.

3. Reflect

- **organise data** – what is emerging from the data? Consider the relevance of organising into themes, categories, perspectives, issues, dilemmas, comparison across sources, interactions, frequencies, organisational relationships, contexts, underpinning values, time and spatial relationships, or cause and effects. Consider wholes, imagine what is missing. Use descriptive accounts, tables, diagrams, concept maps.
- **interpret data** – consider what analytical/theoretical lenses to bring Engage in dialogical exploration by participants – what are we seeing, what might it mean and what are reasons, what theories can help us understand, how have others experienced this, what does the literature say? Imagine implications of taking on different orientations in looking at the data. Consider responding to the data using poetry, metaphor, explorative writing (what intrigues me, surprises me, inspires me?), get feedback about interpretations from others
- **reflect on process** – reconsider interpretative lenses and ways of collecting data – did they tell us what we needed? What dilemmas are emerging? What might we be missing? What questions should we be asking now? Who are we privileging in this? What assumptions are we making? What is life enhancing in what we are doing? How might our values be changing? What are we seeing that we didn't see before? Are we just refining our views and actions or doing a major rethink? (Consider triple loop thinking, 7 inquiry lenses, insight meditation, and action logics to gain greater height, depth and critical inquiry.) What are we learning about students, ourselves, subject, and systems? What are my/our theories now? How do they compare with theories out there? Get feedback from others
- **creating products or processes** – Can we codify our understandings into new processes or models which can be used by ourselves and others? How can we live what we have learnt? Get feedback from others.

What might be implications for next action? What are new questions?

4. Modifying – Plan – act – reflect cycles again

5. Sharing with wider audiences the journey, understandings, products.

References

Creswell, John (2005). *Educational research. Planning, conducting, and evaluating quantitative and qualitative research*. Upper Saddle River, NJ: Pearson.

Kemmis, Stephen (2009). Action research as a practice-based practice. *Educational Action Research*, 17(3) 463–474.

Stringer, Ernie (2008). *Action research in education*. Upper Saddle River, NJ: Pearson.

Whitehead, J. & McNiff, J. (2006). *Action research: Living Theory*. London: Sage

What am I Researching?: Clarifying the Area of Investigation

Everyone who undertakes research starts with the process of clarifying what it is they are going to investigate. As trainers or facilitators, we often ponder on aspects of learning in relation to our learners and the context(s) in which they learn and in which we learn. Our observations about these aspects of our work are often the starting point(s) for clarifying an area of focus for our action research investigation. For example:

Observation: Learners expect you to do all the work rather than develop their own understanding.

Questions: Why do learners have this expectation?

How can I improve my training or facilitation skills to assist learners to develop the willingness and ability to undertake their own learning?

Observation: I consider learning has taken place when learners ask more questions than we have answers for.

Questions: How did learners end up asking more questions than we have answers for?

To what extent do learners feel they are learning when they ask more questions than we have answers for?

What processes could I develop that assist learners develop learning skills?

Observation: Some learners disappear to smoke, are not willing to write and contribute.

Questions: Why are learners disengaged?

How can I improve the learning activities to encourage engagement?

Criteria for choosing a good research question:

- **clearly stating the questions** – accurately conveys the focus and scope for the research
- **contextual** – is it embedded in day to day work?
- **is it manageable?** – within the time constraints – not too narrow to give insight
- **open-ended** – phrased to generate a broad range of insights and understandings
- **self-reflective** – focuses on the actions and processes of the practitioner
- **significant** – focuses on teaching and learning practices which have impact on learners' behaviours or achievements
- **answerable** through the data collection methods and analysis employed

Each of the above provides examples of what could be a topic of investigation. However each needs greater in-depth thought to develop it further. Below are some suggestions for how to go about doing this.

However, it is important that we investigate what we are passionate about. Passion is an important element in undertaking action research. Mills (2007, p.25) suggests talking to colleagues, reflecting on daily classroom life and to consider what nags at you when you prepare for work. For some the process of identifying what you will investigate will not take long, for others it will require a little time.

Criteria for identifying a topic for investigation

Apart from being passionate about your topic of investigation your topic of investigation should also:

- focus on your own practice
- be something over which you have control
- be something you would like to change or improve.

Self reflection to develop your topic of investigation

Ask yourself the following:

- What theories of teaching and learning do I draw on? (The theories of teaching and learning we use influence how we facilitate and train.)

Example: I believe learning is social and that we are strongly influenced by the contexts we are in and the tools we have access to — including mental tools such as theories. This belief means I try to develop collaborative learning environments and make visible the aspects of the context (structure, culture, tools, etc.) that influence or mediate our learning and activity.

- What values do you hold about learning and teaching?

Example: I believe that learners need to develop learning to learn skills to assist them to adapt to new situations and change. Because of this and because I believe learning is social, I value dialogue that questions, wonders, and debates current beliefs. Therefore, I believe the curriculum needs to be relevant and dynamic.

- What is the historical context of how things got to the way they are?

- How did you arrive at your beliefs about teaching and learning? In other words, what is the journey you have undertaken so far in developing your current beliefs?

Using descriptive and explanatory activities

- Use the questions who, what, why, when and how to develop and clarify your topic of investigation.

Example:

What evidence do I have that xxx is a problem?

Which learners ...

What do learners think or experience when ...

How often does ...

How is this topic typically taught?

What is the ratio of time spent doing xxx?

Use questions such as the above to:

- Describe the situation you wish to change or improve
- Describe the evidence you have that the topic for investigation is a problem
- Identify critical factors that affect your topic of investigation (Mills, 2007)

Having adequately described the situation you want to investigate, the next step is to try and explain and focus on *why*.

- What possible explanations might there be for why the area you want to focus on is an issue or problem?
- What possible relationships might there be between different factors?

An Example

Learners expect you to do all the work rather than develop their own understanding.

Question: Why do learners have this expectation? How can I improve my training/facilitation to assist learners to develop the willingness and ability to undertake their own learning?

If we take the topic example given above, the descriptive and explanatory questions might look something like this:

Descriptive activity:

- What evidence do I have that this is a problem?
- When is it that learners expect me (the trainer) to do all the work?
- What is the past experience of learning for these learners? What is the past experience of the industry for these learners?
- What activities do learners actively engage in?
- What is it learners are experiencing when they expect me to do all the work versus when they are engaged?
- How do these learners perform in assessment tasks?

As you can see these questions begin to move our thinking from what might be a deeper reflection on our own teaching that would lead us to try different teaching strategies and approaches to more of a focus on finding out what it is learners are experiencing and what the outcomes are. It is the latter that moves us from reflection to action research.

Now we need to move to the explanatory phase: ask why.

- *Why* is it an issue that learners want me do most of the work?

Possible explanations: There is a relationship between their level of engagement and thinking, learning and the level of interest.

There may be a relationship between learners' prior experience of learning and experience in the industry and their level of engagement.

The steps outlined above will assist you to clearly state the following:

- The **issue or topic** to be studied: Define the issues or events causing concern
- The **research problem**: State the issue as a problem
- The **research question**: Reframe that problem as a question – asking what is happening here?

- The **research objective**: Describe what we would hope to achieve by studying this question (Stringer, 2008, p.39).

Using the example above:

Issue: Learners are not actively engaged; they expect the answers to be given to them.

Problem: Learners lack interest and engagement when (here draw on your observations about when learners exhibit these behaviours)

Question: How do learners experience learning when (here draw on your observations about when learners exhibit these behaviours)

Objective: To understand what the experience of learners is when ...

Having completed these steps you are now ready to do some exploration of the literature.

Case Study: How can I improve my teaching practice? – Dr Helen Bound

The following comes from a project I conducted at the Tasmanian University. BAVE is the Bachelor of Adult and Vocational Education delivered 100% online to mature age learners around Australia.

Research objectives:

- Identify learners' hopes, fears and expectations for working in online learning environments.
- Identify cultural norms within the different BAVE learning communities (i.e. different units).
- Trial different approaches to develop cohesion but encourage difference.
- Use a range of different tools to extend and build on learners' experience.

Research questions:

- In what ways do assessment rubrics limit and/or enhance the dialogic process?
- To what extent does the rubric limit and/or enhance the development of generic skills?
- How are the generic skills related to the dialogic process?

Purpose statement:

The purpose of this project is to investigate what might enhance or limit online dialogue and learning.

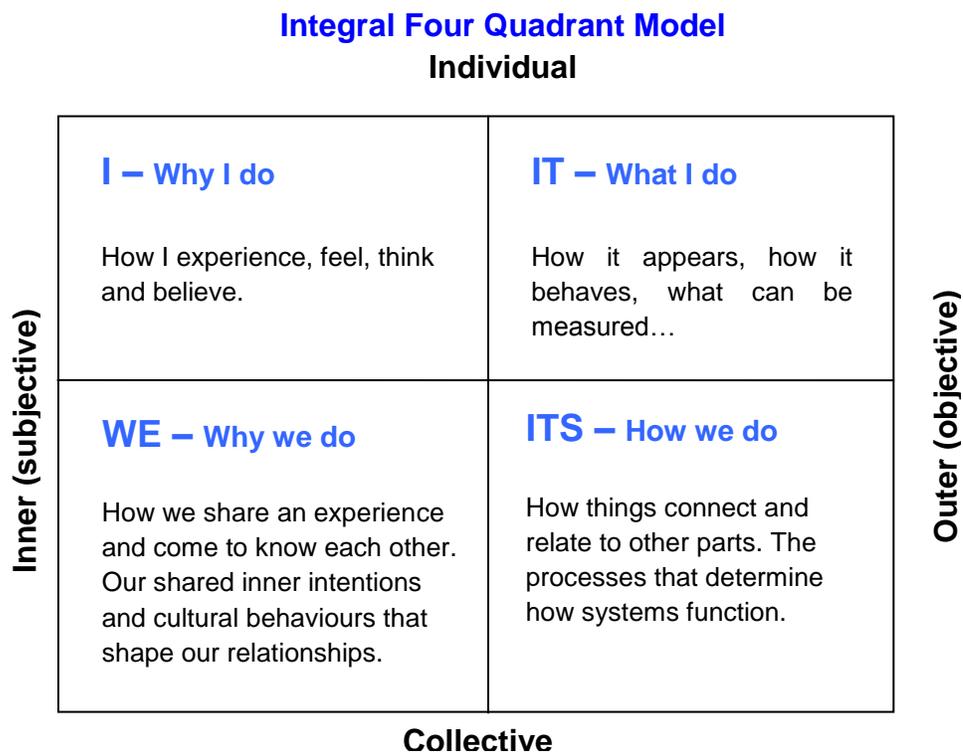
References

Mills, Geoffrey, (2007). *Action research. A guide for the teacher researcher*. Upper Saddle River, NJ: Merrill Prentice Hall.

Stringer, Ernie, (2008). *Action research in education*. Upper Saddle River, NJ: Merrill Prentice Hall.

The Integral Four Quadrant Model: Orienting your Research Methods

Integral theory is a meta-theory that offers a range of generic frameworks and processes that can be used across disciplines and contexts, often enabling an expansion of what we see. It enables reconciliation between competing values and approaches by helping to frame them in larger wholes. The four quadrant model aims to map some key different ways we can know the world. Different sorts of questions can be asked from each of the quadrants depending on a topic.



Often when people are conducting an inquiry they find that they are situated in just one part of the integral model. Even if they think they are doing “qualitative research” they might be framing it in such a way that it comes from an **IT** view of the world, rather than getting inside the quality and nuances of the experience.

The diagram can be further developed (see below). The inner boxes are the direct experience of each category. The outer boxes are when we look at these experiences and see greater patterns.

The blue italics are the different research methods that are used when people are engaged in exploring these particular categories. There are research methodologies which go across categories – e.g. *auto | ethnography* (I –WE).

The Integral Four Quadrant Model

		Interiors	Exteriors
Individual	<p>I (individual subjective)</p> <p>Patterns of development and learning (e.g. transformation, learning styles) <i>(Psychology)</i></p>	<p>IT (individual objective)</p> <p>Judgement, standards, measurement Tools for measuring competence <i>(Empiricism)</i></p>	
	<p>Inner thoughts, feelings, intuitions, dreams, reflections, experiences, values, motivations, lenses, worldviews, mental models, beliefs <i>(Phenomenology, autobiography)</i></p>	<p>Products, behaviours What I do or make <i>(Behaviourism)</i></p>	
Collective	<p>Relationships, dialogue, shared meaning <i>(Hermeneutics, narrative inquiry)</i></p>	<p>Feedback of the world to my/our actions, and my response to the world <i>(Auto-poesis)</i></p>	
	<p>Culture, values, norms <i>(Anthropology, ethnography)</i></p> <p>WE (inter-subjective)</p>	<p>Ecological and socio-political systems, networks, dynamics, policies <i>(System dynamics, sociology)</i></p> <p>ITS (inter-objective)</p>	

Good action research includes all aspects in dynamic relationship in a process of:

- Inquiry
- Community of inquiry
- Systemisation
- Embodiment

The Integral Four Quadrant Model – Examples

What might designing teaching and learning look like in each of the quadrants?

	Interiors	Exteriors
Individual	<p>I (individual subjective) <i>Personal, inner experience</i></p> <p>What is your own experience? What thinking and seeing do you bring to your training/curriculum design? What do you value? What have you learnt about yourself?</p> <p>How do your learners think, feel, value? What is the learning experience like for them? What learning styles do they have? What are their learning histories?</p> <p>Curriculum designers could also add, how do your trainers think, feel, value...?</p>	<p>IT (individual objective) <i>Tangible products and behaviours</i></p> <p>What are the classroom routines you as trainer implement or as a curriculum designer design in?</p> <p>What tools for learning are you using?</p> <p>How is the class set up and how does this influence learning?</p> <p>What is the range of learning activities?</p> <p>What are the learners required to do?</p> <p>What are the learners required to produce?</p>
Collective	<p>WE (inter-subjective) <i>Inter-personal, shared cultures</i></p> <p>What relationships do you have with your learners?</p> <p>What is the classroom learning culture you strive to create?</p> <p>How do the students relate with each other?</p> <p>What does your organisation value – explicitly and implicitly? How are these values different to yours?</p>	<p>ITS (inter-objective) <i>Curriculum, policies structures and systems</i></p> <p>How does the physical environment and layout shape what is possible?</p> <p>How do you use and/or design curriculum documents to inform planning and assessment?</p> <p>What are the rules you and your organisation are required to follow? How have they interpreted and enacted these rules? What are the dynamics as a result of these?</p> <p>How do the quality assurance processes shape what is perceived as possible?</p>

The Integral Four Quadrant Model – Examples

What might assessment of student work look like on the four quadrants?

Interiors	Exteriors
<p>I (individual subjective)</p> <p><i>Authentic personal response</i></p> <p>Student – my experience of creating the work, insights about my journey.</p> <p>Teacher or student peer – Shares with the student how this work affected me personally – what I experienced. Has the opportunity to open up to novel insights, everyone is learning.</p> <p>Teacher as responder: “This inspired me, this surprised me, I wondered what if..., I felt for you, this resonated with me, you gave me a new way to think about this, what a fabulous question, I have been thinking how to apply your idea, you challenged me here, I am feeling I want to challenge you...”</p>	<p>IT (individual objective)</p> <p><i>Meeting a standard</i></p> <p>Student – demonstrates understanding or competence through creation of “work” or product that can be measured against standards by the teacher, peers and self to see where improvement is needed. Through self-evaluation the student may iterate to new understandings.</p> <p>Teacher as judge: “The work is ‘good’. It has correct grammar though there are some spelling mistakes here. It is well set out and clear. In the main it is well argued though a little confusing in this section. Next time, you need to....”</p>
<p>WE (inter-subjective)</p> <p><i>Creating tactful relationships</i></p> <p>A dialogical relationship between the teacher (or student peer) and the student where the teacher comes to know the student – their thinking, intentions, perspectives, learning styles and values. They assist the student in development and learning towards their potentials and goals.</p> <p>Teacher as cognitive coach: “I see you are trying to do this... how are you thinking/feeling about this? What are you valuing here? Where do you want to go? What about... How might the standards for what you are doing be changing? How are you changing?”</p>	<p>ITS (inter-objective)</p> <p><i>The environment is the teacher</i></p> <p>The feedback that the world or others give to the student if their work or themselves become an actor in the world. The teacher's role is to help make this visible and help unpack it.</p> <p>Teacher as interpreter: “What feedback are you sensing? How do you understand this? What interpretative lenses are you using? Can you read this in other ways?”</p>

Core Principles of Ethical Research Practice

Research carried out under the auspices of IAL, including any research for which IAL has provided funding whether in whole or in part, will seek to ensure that the following principles are upheld:

- Research is carried out in a way that maintains quality, integrity and honesty.
- The good name of [*put name of relevant organisation here*] will be maintained and safeguarded.
- Research will be carried out within the laws of the Republic of Singapore and any other nation in which the research is connected.
- Research will be subject to relevant national legislative Acts, e.g. Computer Misuse Act, Copyright Act (see: <http://statutes.agc.gov.sg>).
- Researchers will identify any potential ethical issues that may arise in the course of the research, as well as possible ways in which they might deal with these.
- Researchers will seek relevant permission and clearance for the use of all protected data (e.g. official documents classified as confidential, secret or top secret; internal documents which are not publicly available).
- Written informed consent will be given voluntarily by all participants, unless otherwise agreed with the Ethics Committee (e.g. in the case of observation of public activity in a natural setting). Participants will be allowed to withdraw from the research at any point that they wish.
- If a participant were to withdraw from the research, they have the right to request that their data is removed from the study and destroyed.
- Research that may be altered or made ineffective if the participants are fully briefed on the nature of the research, but where they are informed that they are taking part in research (e.g. behavioural research testing actions in a natural setting or individual perception), should gain clearance from the organisation in which the research is being undertaken.
- Where human participants are involved in research, they should not be subject to any undue physical or psychological risk or harm, invasion of privacy, coercion or embarrassment.
- Any low level risk to which individuals could be subjected within the research should be clearly outlined to participants, along with the related benefits, before informed consent may be obtained.

- The individual rights of each participant will be respected with regard to gender, race, ethnicity, religion, disability and sexuality.
- Where children (below age 18), other individuals under guardianship and vulnerable individuals who may not be able to give informed consent are to be involved in research, ethical clearance will be required from IAL before research can commence. Permission will also need to be sought from any relevant bodies or individuals, such as schools, parents, guardians and medical institutions.
- Any research involving children will be carried out following the charter of the United Nations Convention on the Rights of the Child (<http://app.msf.gov.sg/Policies/ChildrenYouth/ObligationsundertheUNConventionontheRights.aspx>) as ratified by the Singapore Government.
- Research will be carried out in a way that respects the cultural context of and within Singapore, as well as helping to raise awareness of this through its research on the continuing education environment.
- Research will avoid bias or discrimination in terms of the research process, discriminatory language or accessibility. This will include conducting research in multiple languages where appropriate and recognising different language and literacy needs and levels.
- Confidentiality and anonymity will be provided for research participants (whether individuals or organisations), unless otherwise agreed with participants as part of the informed consent process (e.g. highlighting good practice cases in leading organisations). This includes use of personal data, research responses, documentary evidence, photographs and other identifying information.
- Researchers will declare any personal interest or conflicts of interest related to the research. Personal interest does not necessarily undermine the nature of research (e.g. insider research within the workplace can be very valuable), but declaring such a position helps to maintain the integrity and meaning of the research.
- All written work referred to in the research, whether published, unpublished, online or other will be correctly referenced following academic conventions, using the American Psychological Association (APA) referencing system (<http://www.apastyle.org/manual/related/index.aspx>), and avoiding potential for plagiarism (e.g. presenting another's work as one's own).
- Where research includes the use of data belonging to Singapore Government departments, agencies or institutes other than IAL, relevant permission and

clearance for its use will be sought, and any research protocols adopted by those bodies will be respected.

Information Sheet
[Title of Project]

XXX, 2010

Dear XXX

We would like to invite you to take part in [put Title of Project here].

I am doing this project because...

What is involved if I take part in the research?

With your permission, the interview will be audio recorded and transcribed. We will email you a transcription of the interview for you to check and verify, if you wish. A copy of the interview questions is included for your information. There is no preparation required for the interview, rather the interview questions are included to provide you with information about what is involved in the interview.

I want to share this work with my colleagues etc...

If I publish or talk about anything from this project, outside my colleagues, I will make sure I use a pseudonym so you are not identifiable.

Should you have any questions, please do not hesitate to contact [insert name and contact details].

Yours,

[Name, Organisation]

Full Name	
Contact Details (<i>phone number and email</i>)	
Signature	
Date	
I would like a copy of my consent form	YES / NO
I would like a copy of my transcript	YES / NO
I would like a copy of the research report	YES / NO

The Interview

There are different kinds of interviewing. The research literature typically talks about structured, semi-structured and unstructured interviewing.

Structured interviews means using set questions asked exactly as they are worded and in the order they are set out in. This type of interview questioning is useful for open questions in for example, an oral survey where you might have already identified your variables. Rigid structuring does not allow for the collection of data that helps us to explore and more deeply understand what we want to know. In terms of power relationships, the interviewer is very much in charge.

Semi-structured interviewing is commonly used, being a typical technique used in case studies. The interviewer will start with a list of pre-designed questions; however, depending on the individual, and the flow of the conversation, the wording and the order of the questions may be adjusted as the interview is conducted. This allows for the interview to be more conversational in nature. In terms of power relationships the interviewer guides the conversation to ensure all questions are covered, but semi-structured interviewing does allow for the interviewee's voice and story to come through, so the power relationship is a little more balanced than in structured interviewing. This requires the interviewer to be skilled in listening and following through on threads of conversation offered by the interviewee in response to the questions. For action research, you might use this form of interviewing early on and decide at different points in the action research cycle that this form of interviewing would be useful.

Unstructured interviewing is perhaps the interviewing strategy most appropriate for action research. This type of interviewing is definitely conversational. When applied to action research you will have in mind what it is you want to find out more about, understand, get to "know" the experience of and so on. You might only have time (e.g. 5 minutes) with your interviewee, to you might hone in on one question at that point in time. In a different five minute opportunity you might ask a different question. Indeed you might not use a question, but pose a problem, a dilemma, ask the interviewee to ponder something you are also pondering. Here your intent might be to intentionally transform or make visible to the interviewee aspects of their or your context and/or practice.

So depending on your purpose and available time (yours and the interviewee) you will use different types of interviewing strategies and techniques.

Things to have in mind when designing interview questions

- What information do you need? (A common mistake is for new researchers to ask interviewees their research questions, and expect them to be able to answer them. (Why is this very definitely not good practice?))
- Open-ended questions – how, why, what...? Too open causes vague answers.
- Closed questions – yes, no, one word answers – limited potential for probing deeper, but useful for scanning. “Do any of these apply to you?” can include getting information about age, qualifications etc.
- Direct questions – ask the interviewee directly what you need to find out.
- Indirect questions – infer the relevant information from the information supplied.
- Repeated probe questions – help to go deeper, get more information, explore the reasons behind something, what someone values, believes.
- Concrete versus abstract questions – if too abstract they won’t connect with the interviewee.
- Avoid jargon.
- Questions that help someone relive an experience – asking for descriptive detail.
- Structure the interview questions so that:
 - the questions have a logic that makes sense to the interviewee
 - the questions maintain motivation and facilitate recall of information
 - similar items are grouped together
 - sensitive or challenging questions are put further into the interview and within context.

Introducing the interview

- Introduce yourself and your project
- Complete any formal documentation such as consent forms and explain how the information will be used and kept confidential
- Introduce the main topics that will be covered in the interview
- Request permission to take notes or use a tape recorder... and chat with the interviewee while setting the tape recorder up. It can be useful to ask for their written signed consent, to help avoid misunderstandings – see an example of a consent form found in this report.

Conducting the interview

- Adopt a seating arrangement that is comfortable allowing for freedom of eye contact and non-verbal behaviour.
- Monitor whether the interviewee has answered the question and whether you understand what the interviewee means.
- Test your understanding of what is being said whenever you feel uncertain.
- Repeat back to the interviewees what they have said to ensure your notes are correct or to prompt them... “have I got that right?” “you said this, I wonder....”.
- Avoid asserting your own opinions into your summaries of what the interviewee has said... but it may be appropriate to engage in a dialogical conversation where you share insights or critical or imaginative questions to help the process of going deeper.
- Avoid asking loaded questions which incorporate unwarranted assumptions.
- Avoid asking questions which have more than one part.

Closing the interview

- Ask the interviewee if they have said all that they would like to say.
- If you are going to produce a transcript ask the interviewee if they would like the opportunity to check it.
- Label the tape with the date, interviewee name and name of project.
- Confirm any arrangements for follow-up – for example interviewee looking at draft research report and giving feedback.
- Close the interview by thanking the interviewee for their time and effort.

Source: Robinson, V. & Lai, M.K. (2006) *Practitioner research for educators: A guide to improving classroom practice*. California: Corwin Press

Listening

Of course, as interviewers we need to listen, to give space for the interviewee. There are different ways in which we can listen. As an action researcher engaging in what we call hermeneutic listening and interpretative listening will most likely provide us with rich data and help us in exploring our practice.

Hermeneutic listening is where we really listen to what our interviewees are saying, in order to inquire into whom we are, who they are, and become imaginatively engaged in participation into something greater than us.

Interpretative listening is when we are curious to understand our interviewee's thinking and processes. The intent of our questions and probes will be exploratory.

Evaluative listening is if we are making judgements about what we are listening to (and often we do) we need be aware of our biases, of where the judgements are coming from, why are we judging what we are hearing as being in a particular category, as good, bad, and so forth? It is important we do not impose or pass on our judgements. This will quickly draw the interview to a close as the interviewee will cease to provide you with information.

Validity

Validity of action research

1. How is my practice comprehensible?

- Demonstrate that I act in a rational way, without prejudice and with care and consideration for all
- Provide reasons and justifications for my actions
- Explain how my actions are grounded in my values

2. How is my practice authentic?

- Demonstrate that I have fulfilled my values over time
- Critical reflection on what I have done
- Demonstrate that I have acted sincerely and in other's best interests. I am aware of ethical issues and the need to safeguard participants' well-being.

3. How is my practice truthful?

- Include an evidence base that is strengthened by rigorous gathering of data, analysis and interpretation.
- Test the validity of the evidence against the critical feedback of others, in relation to my articulated standards of judgement.
- How have I subjected my accounts to the scrutiny of validation groups and made the record of these meetings public?

4. How is my practice appropriate to its context?

- Show an understanding of contextual issues
- Show an understanding of some of the cultural, historical, economic and political forces that have created the current situation.
- Demonstrate my commitment to transforming my existing situation into a better one.

Based on Habermas's criteria of social validity. (Source: McNiff, J. & Whitehead, J. (2009) *Doing and Writing Action Research*, London: Sage)

Validity of the measurement instrument

“Validity asks the question: are we measuring what we want to measure?” (Muijs, 2004, p.65). Much of what we might want to measure cannot be measured directly such as learning and self-esteem. Muijs, (2004, p.65) explains this:

Learning, like self-esteem, cannot be measured directly. Again, to be able to do that we would need to plug directly into people’s brains and see what has actually happened there. Tests, essays and whatever other measure we use are always indirect measures of learning. Whether they are good measures is hotly disputed. Are the tests too narrow? Are they measuring higher-order skills, or only basic skills? All these questions relate directly to the validity of the test.

The validity of any measurement instrument (survey/questionnaire) is critically important. There are different types of validity. Table 1, adapted from Creswell (2005), provides an easy to understand summary of these types of validity.

Table 1. Types of Validity

Types of validity	What is measured?	What evidence is obtained to substantiate it?
Content validity	How well do the questions represent all of the possibilities of questions available?	Ask experts if the questions are representative of the area of interest.
Criterion-related validity	How well do the scores on the instrument relate to an outcome? How well do the scores on the instrument predict a future outcome?	Select an outcome and correlate or relate the scores to it. Select a future outcome and correlate the scores with it
Construct validity	What do the scores on the instrument mean or signify?	Use statistical procedures, such as correlating scores with other scores; examine the correlation among questions on an instrument; or test a theory against the scores. Use non-statistical

Construct validity (cont)	What is the intended purpose or use for the scores from the instrument? Can we safely generalise from them?	procedures, such as examining the values inherent in the interpretation of the scores; assess the relevance of the scores for the purpose of the study; or consider the likely social consequences.
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Source: Creswell (2005, p.165)

As you can see it is a complex process to design a survey or questionnaire that is valid. As such, it is not surprising that it is quite common for researchers to use instruments that have been developed by others who have already tested the validity of the instrument.

Reliability of the measurement instrument

If you were measuring your weight as part of a diet regime you would want to be sure that your scales were reliable. This is exactly the same if we are measuring, for example, self-concept. Muijs (2004, p.71) explains reliability in statistical measurement as:

Whenever we are measuring something, there is some element of error called measurement error. Reliability then refers to the extent to which test scores are free of measurement error.

Unreliable data can be a result of:

- Questions on instruments being ambiguous and unclear
- Procedures of test administration vary and are not standardised
- Participants are fatigued, nervous, misinterpret questions or guess on tests (Rudner, 1993, in Creswell, 2005, p.162).

As with validity, there are different types of reliability. Again we have referred to Creswell (2005) to summarise these types of reliability in Table 2 and to explain the terminology (pp.163–4).

The *test-retest reliability* means the researcher administers the test at two different times to the same participants to examine the extent to which the scores from one sample are stable over time from one administration of the test (instrument) to another.

The *alternative forms reliability* involves using two instruments, both instruments measure the same variables and relate (correlate) the scores for

the same group to the two instruments. Both instruments need to be similar in terms of level of difficulty, content and types of scales. Creswell (2005, p.163) suggests that the advantage of this form of reliability is that it “allows you to see if the scores from one instrument are equivalent to scores from another instrument The difficulty ... is whether the two instruments are equivalent in the first place”.

Table 2. Types of Reliability

Form of reliability	Number of times instrument administered	Number of different versions of the instrument	Number of individuals who provide information
Test-retest reliability	Twice at different time intervals	One version of the instrument	Each participant in the study completes the instrument twice
Alternate forms reliability	Each instrument administered once	Two different versions of the same concept or variable	Each participant in the study completes each instrument
Alternate forms and test-retest reliability	Twice at different time intervals	Two different versions of the same concept or variable	Each participant in the study completes each instrument
Inter-rater reliability	Instrument administered once	One version of the instrument	More than one individual observes behaviour of the participants
Internal consistency reliability	Instrument administered once	One version of the instrument	Each participant in the study completes the instrument

Source: Creswell (2005, p.163)

The *inter-rater reliability* is used when observing behaviour. Two or more researchers observe the behaviour of one or more individual and then the researchers compare scores to see if they scored similarly or differently. This approach ensures the observers are trained.

Internal consistency reliability means scores from an instrument are reliable and accurate if an individual’s scores are “internally consistent across the items of an instrument”. This is why surveys will often ask a similar thing in different ways. So if someone completes items at the beginning of an instrument, then they should

answer the questions later in the instrument in a similar way. There are a number of different ways of examining for internal consistency – see Creswell (2005, p.164) for further details.

References

Creswell, J. (2005) *Educational research. Planning, conducting, and evaluating quantitative and qualitative research*. Upper Saddle River, New Jersey: Pearson Education Inc.

Muijs, D. (2004). *Doing quantitative research in education with SPSS*. London: Sage Publications.

Searching and Reading the Literature

In this section we will provide an approach to systematically searching the literature; that is, how to develop a search strategy. This will be followed by an example, of how we can capture what we read and begin to make some assessment of what we read.

This step is important as it provides us with information about how the topic has been understood and conceptualised or thought about by others and how others have undertaken their research. Understanding how others have undertaken research into this topic will provide us with some ideas for how we want to investigate our topic.

Search strategy

A search strategy that is planned helps us and our readers know the strengths and limitations of our literature review. Our first step is to identify the concepts in our research question.

Research question

What is the experience of learners in TMIS with WSQ programmes?

1. What learning experience do learners expect?
2. What motivates learners to attend?
3. What impedes and what supports learning?

We can break down the question into the following concepts. Have we missed anything?

Search Terms

Experience <i>What is this experience of learning?</i>	WSQ	Motivation	Expectations	Impedes learning	Supports learning
Response	Competency-based training	Incentive			
Lived experience	Vocational education and training	Drive			
	Vocational training and education	Inspiration			
		Reasons			

You can see that we have started putting in alternative terms, for example, for experience, WSQ and motivation that might be used by other researchers. As indicated by the comment box, what alternative terms we select may depend on how we want to interpret a particular concept such as experience.

We can then use these terms/words in their various combinations when we undertake our search. But first we need to scope the search.

Scoping the search

The points below are some suggested ways of scoping the search:

- **Date of research?** – We might for example limit the search to any literature since 1990 or 2000... What do you think? Why might we set particular dates? What is our rationale for deciding for example to limit the search for literature since 1990? In fact for the research question above a date around the establishment of competency-based training in other countries or in Singapore might be the rationale.
- **Types of papers:** empirical research, conceptual papers? An empirical paper is one that is a write up of an actual investigation that was undertaken. Other types of papers are conceptual papers where authors put forward a concept and/or argue a case. They do not use

surveys, or interviews etc. rather they will tend to draw on the work of others to support their case.

If we limit to empirical papers this mean we do not refer to textbooks on learning for example at this stage. However when we look at our data or need to understand more about what an author is discussing we may well refer to books and texts.

- **Language:** English

Sources

Identifying what sources we will use to search for literature is another aspect of scoping our search. For example we could use the following:

- National Council for Vocational Education Research (NCVER) website <http://www.ncver.edu.au>
- VocED (can be accessed through the NCVER website)
- Proquest education
- Education Resources Information Center (ERIC) database: <http://www.eric.ed.gov/>
- Google scholar

On the next page we have selected an article as being relevant, first by looking at the title, then the abstract. On this basis, we made a decision to read the article and in this instance found it to be very relevant. The table we have used allows us to capture the essence of the article, which we can always refer to later for any details we need. If we complete the table with many articles, we can then identify themes that we can use to structure our literature review.

Literature Review Notes

The following table is presented as a guide for taking notes from the articles. I have read and made notes from one article as an example.

Bibliographic details	Summary main points ¹	Methodology and rigour ²	Useful because ...
<p>Scanlon, Lesley, (2009). Identifying supporters and distracters in the segmented world of the adult learner. <i>Studies in Continuing Education</i>, 31(1) 29–43.</p>	<p>The purpose of this paper is to investigate different aspects of learners’ lives and the interaction between these aspects on their learning.</p> <p>Return to study for adults results in another situated identity, challenging previous identities (Illeris, 2003). Scanlon refers to these different aspects and identities and “segments”. This research found there were supporters and distracters to learning both inside the college and outside the college.</p> <p>Inside the college these included: Teachers – those who treated students with respect; teachers who were enthusiastic and engaged with learning and teaching, teachers who communicated effectively with students and between themselves</p>	<p>Phenomenological approach using a teacher-researcher approach. In-depth interviews – “recorded conversations” at first semester of study, mid-way through the programme and in the final semester.</p> <p>Students were enrolled in a university preparation course – general vocational curriculum. Students from a low socio-economic area. (n=35) 20 women and 6 males in the 19–29 years; 3 women and three male</p>	<p>Discussed the <i>experience</i> of learners.</p> <p>Methodology used interviews <i>asking the learners what their experience was</i>. This is part of a much larger project – see additional articles in the reference list</p> <p>Provides a number of factors to consider when formulating our data collecting instruments.</p>

¹ Include in this section: aim/purpose/research questions (usually found in the introduction), major findings and discussion points

² Include in this section the research approach (e.g. mixed methods, ethnographic, survey etc., sample, ways in which data was collected and analysed etc. In many, but not all articles there is a section headed Methods or Methodology etc. In relation to rigour – is the sample representative? Is the design of the research valid/reliable/ trustworthy/credible? Is evidence used to support claims made?

	<p>to aid a consistency and teachers who had content expertise and student centered pedagogy, teachers who had expert curriculum interpretation, teachers who were prepared to negotiate with students. There were both positive (supportive of learning – and negative (distracters of learning to all these aspects).</p> <p>Other students were also a supporters or distracters of learning – mentors, intimidators, the cohesion or otherwise of the student group.</p> <p>Learning outside the college: family and friends, children, former partners.</p> <p>Strong supporters of learning were important for continuing the learning journey and engaging with the learning.</p>	<p>30–39, one female in the 40–49 years and 2 women over 50.</p> <p>In the 10–29 years there were 11 single parents, one of these was male.</p> <p>Thematic analysis.</p> <p>Quotes and stories used to support claims made.*</p> <p><i>*Note: We have not, at this stage, commented on valid/reliable/trustworthy/credible aspect.</i></p>	

You might want to consider the suggestions given for the search strategy and if you have alternative suggestions to the table above for capturing the literature we read.

Developing Surveys

From experience of completing surveys you will be aware that they can take a variety of forms. Length, structure (...is the survey divided into a number of sections, are all to be answered by everyone or are some sections dependent on who you are or your responses to a particular question?), types of question included and the sort of responses you are asked/able to give, can all vary. Those are all things to therefore be considering when you design a survey or adapt an existing survey.

So, first let us consider some general design points:

- **Length:** there are actually several related points to take into account relating to length...
 - *Number of pages* is important
 - *If you received a survey that resembles the yellow pages in thickness how would you feel? If you were responding to a survey, how many pages would seem overwhelming? How many pages would it take before you suffered “respondent fatigue” and either gave up, or started giving incomplete or inaccurate answers for the sake of wanting to finish the survey?*
 - *BUT ...what about the number of questions and/or the time that it takes to respond to each question?*
 - *Perceived length* is important – and the *number of pages* and *number and style of questions* can all influence that perception. Perceptions relating to the ease and particularly time that a survey will take to complete are therefore important to consider when designing the survey (in terms of general layout of questions, answer format, division of the survey into sections...).
 - *Estimated completion time* is important. Generally, people will appreciate an indication of how long it will take to complete the survey. Be honest – think about how you would feel if you started a survey which you thought was going to take 10 minutes and after 10 minutes you are only half way through.

- **Layout.** General impressions are important. Does the survey appear easy to read? Is it easy to follow and straightforward to complete? Font style and size, spaces between questions and sections, and the format and space for responses are things to consider. It is important to be consistent in relation to layout and particularly the format required for responses – for example, avoid switching between asking someone to tick a box or circle a chosen response. Position response boxes in line with each other down the page – this not only helps the respondent but it also speeds up data processing. Sections can help break up what may otherwise appear a long survey. You can use sections to block questions of a similar type together and/or block questions that relate to a particular issue together.
- **Order of sections and questions.** Once again, the issues to consider are how things will be perceived by a respondent and how they are likely to react.

If the first thing you are asked is personal information do you think that you would feel (a) great, this is simple and easy to answer, or (b) hesitant, wondering why such information is really needed?

If obtaining some personal information is essential for your research, and you decide that because of possible reaction (b) you will leave those questions to the end of the survey, what problem may you encounter?

Do you think that it is preferable to start with easy to answer (yes/no) response style questions and leave any open-ended questions (i.e. questions that require an extended written response) to the end? Once again, what problems may arise with that approach?

Designing questions

- The key question to ask yourself throughout the process of designing a survey is “Is this question *essential* or merely *interesting*?” “Essential” means that the question is needed to generate data that will answer one of your research questions. If something is related to the issue you are researching, but not directly connected with one of your questions, it should NOT be included in the survey.
- “Closed” and/or “open” is then a basic issue to consider. Does the question you want to ask suit a fixed response (yes, no or set options?) or do you need to leave it “open” for respondents to write an answer?

Whichever option you choose, you need to be sure that you will be able to use the data arising from responses. Therefore, being clear about what analysis you will undertake and ensuring that the way you are structuring a question will enable you to do that, is essential.

- Closed questions can have various formats and relate to different types of scales. They can require a respondent to choose only one option or allow them to choose for example, their “three most important factors” or as many of the response options as they like (e.g. all factors relevant to their circumstances).
- With open questions you have to decide how much space you need or *want* to give respondents. You need to think about the detail you are seeking and also, how you plan to “deal with the data”. What will you do with several lines of written response from each respondent? Will you be able to manage the data? If you will not be able to use lengthy responses, then you should not be encouraging them!
- Wording of questions and wording of instructions are important. You need to keep things as simple and clear as possible. Avoid using specialist or technical language unless you have a sample population who you are sure will be fully familiar with the language. Remember that what is clear to you may not be clear to a respondent! Therefore, you need to plan a **pilot survey**.

Piloting the survey

Piloting is a crucial stage in developing a survey.

- *Think of four reasons why you should pilot the survey.*
- *Who would you use as a sample group for piloting a survey which you are intending to administer to Secondary 3 students in a case study school?*
- *How should you administer the pilot study surveys?*
- *Consider these scenarios. (i) You send out 12 surveys in your pilot study. You allow two weeks for responses but after that time, only have two responses back. What do you do? (ii) You receive 10 returns. Many of the respondents have misinterpreted several questions. Some respondents have also only provided a few words in response to a question where you hoped to get a few lines of response. What are two possible next steps you can take in developing your survey?*

Triangulation Matrix

Research questions	Data Source		
	1	2	3
R.Q. 1			
R.Q. 2			
R.Q. 3			
R.Q. 4			

Reflective Practice

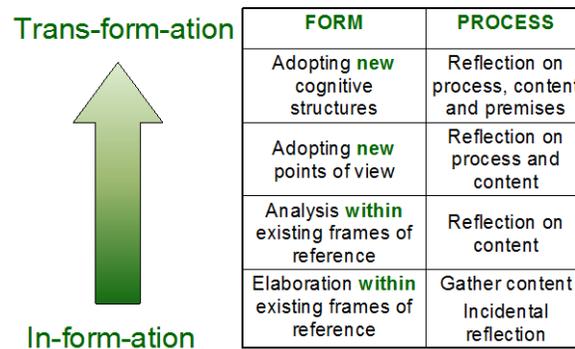
Learning new techniques for teaching is like the fish that provides a meal for today; reflective practice is the net that provides the meal for the rest of one's life (Biggs, 2003, p.7).

We all reflect on our training/facilitating/lecturing. *What worked well? Why? What can we bring forward to use next time?* We also ask ourselves: *What did not work well, why and what can we do differently next time?* So what is the big deal about reflecting on practice?

There are a number of different approaches to reflecting on our training/facilitating that allow us to reflect more deeply; a bit like the difference between low level thinking and high level thinking/surface – deep learning. Yorks and Marsick suggest we can move from just considering information to transforming the very way we think, potentially transforming the way we train/facilitate. For this reason I think it is a useful model to frame up our discussion about reflective practice.

Think for a moment about the diagram below.

Types of Learning



Source: Yorks & Marsick (2000) *Organizational Learning and Transformation*. In Mezirow, Jack et al. (2000) *Learning as Transformation: Critical Perspectives on a Theory in Progress*. San Francisco, CA: Jossey-Bass

Example – Subi

Let's use the example of the following self-dialogue by Subi. Subi has eight years of industry experience, and has been training for about three years now. She has encountered a range of different groups and contexts, and knows that she needs to include variety in her sessions, that each group and each learner is different and she needs to adapt to her learners. She does this by getting as much information as possible about the individuals in the group before she commences the training. She is also a great believer in establishing a relationship with the group. Subi will often prepare materials that scaffold the learning, breaking the content or skill to be learnt into bite-sized chunks and presenting them in fun ways to learn. She is used to getting good results in her evaluations and for the most part positive informal feedback from her learners.

This week however, after a two-day session she received poor evaluations, and two learners in the group said to her they felt confused and were rather angry. Subi felt mortified and sat down with the evaluation sheets and a cup of coffee and pondered the situation.

Questions: *“Why did that session not work well? I used that same session a few weeks ago with a different group and it worked a treat?”*

Answer: *“Hmm I suppose the learners were a different group. There were quite a few in the group who had no experience of the industry, whereas last week the group had quite a lot of people in it that did have industry experience. Perhaps I was assuming too much prior knowledge? Maybe I should make sure I know the group much better to start with, and then I can adapt and break the process down for them much more.”*

Here she pauses in her thinking and notes the fancy heels being worn by the young woman walking outside the café window and wonders if the wearer has ever ridden a Honda 600 – smooth ride, handles well ...

If we analyse this self-dialogue using Yorks and Marsick (2000) Types of learning, then the questions to ask are:

Is Subi <i>elaborating within</i> existing frames of reference?	Yes. This is evident in her reflection about the make-up of the group being different.
Is Subi <i>analysing within</i> existing frames of reference?	Yes. Subi has done enough training by now to know that different groups behave differently. What is a little bit different here is that while she “knows” it, she has not before encountered a situation where it really mattered to her. She is using what she already knows to frame her questions and answers.
Is Subi adopting <i>new</i> points of view?	No. There is no <i>new</i> point of view in her thinking at this point. She is well aware of group differences and the need for scaffolding and using a variety of learning strategies.
Is Subi adopting <i>new</i> cognitive structures (ways of thinking/thinking structures)?	No. Unless she adopts new points of view she is unlikely to adopt new cognitive structures. She is not going to try anything new, nothing will be different from what she has done at other times and in other ways before.

Let’s eavesdrop further on Subi’s thinking.

She comes back from her reverie and thinks, no, there is more to it than that, that is part of the story but it does not feel as though it is the whole story. So what is going on?

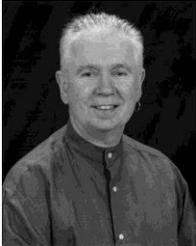
She recalls Robert (another trainer) talking about how they set up an expectation right at the beginning of a session that the learners would not only participate, but they would be challenged. She further recalled that this trainer had talked about how they gradually handed over responsibility for learning to their learners. [Subi had not really understood what this meant at the time, but now it seems relevant and meaningful]. So, she pondered, did I spoon-feed them too much and then in the last exercise just expected they would be able to do it on their own? The previous group had probably

managed it as they had all shared previous experiences, but this group did not have that to call on. Maybe if I had gradually expected them to do more and more on their own rather than all at once it would have helped? Yes sure it was not only that in addition this group probably needed something like those additional materials I put together a year or so ago, those case studies. Perhaps I could pull some of those out for the group I have in a few weeks time and adapt them. I would need to change the sort of questions I ask so they [the learners] do a bit more themselves each time. Hmm I will need to think about how I do that. Maybe I should talk with Robert ...

<p>Is Subi adopting new points of view?</p>	<p>Yes she is beginning to adopt new points of view. When she considers the issue of handing over responsibility for learning to her learners Subi is beginning the process of adopting new points of view. However this is the beginning of this part of her journey. To truly adopt this new idea (new to Subi) it will take time and application.</p>
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Critical Reflection

The above type of learning is one way of understanding reflection. Stephen Brookfield in his book "*Becoming a critically reflective teacher*" provides another way of thinking about and "doing" reflection.



"We teach to change the world" (Brookfield, 1995, p.1)

Brookfield's work on critical reflection is well known and respected amongst adult educators and teachers of youth alike.

One of his key ideas is that by using four lenses – described below – helps us become aware of our assumptions; gets us away from our usual way of seeing and interpreting teaching/training/facilitating experiences.

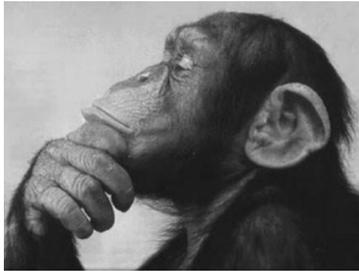
Brookfield, Stephen (1995). *Becoming a critically reflective teacher*. San Francisco: Jossey-Bass Publishers.

What does Brookfield mean by *critical* reflection?

Brookfield writes about uncovering the assumptions about how we work as practitioners (trainers, teachers, lecturers or facilitators). As indicated in Subi's reflection, we all reflect, but we do not necessarily critically reflect. Critical reflection is NOT about reflecting on the nuts and bolts of our teaching. Brookfield (1995, p. xiii) suggests that reflection turns into critical reflection when we focus on unearthing and scrutinising two kinds of assumptions: (1) those that mask the ways in which the variable of power affects and often distorts educational interactions; (2) those that seem congenial but that actually work against our own best interests.

We cannot assume, argues Brookfield, that what we intend (for example, when we say something, tell a particular story, allow discussion to go on, present pictures, provide practice opportunities and so on) is what our learners take away with them. By examining our assumptions, which are the beliefs about the world that we take for granted, and how we think and act, we learn not only about ourselves, but about our learners and the context in which we teach.

Autobiographical Lens



What was your experience as a learner?
Have you ever said,
“I will never do *that* to my learners”?
OR
“She was a great teacher, I try and model my own teaching on her”?

The Lens of Your Learners

What is your learner’s experience of how you train/facilitate/lecture/enable?

How do they make sense of the materials, the activities?



The Lens of Your Peers

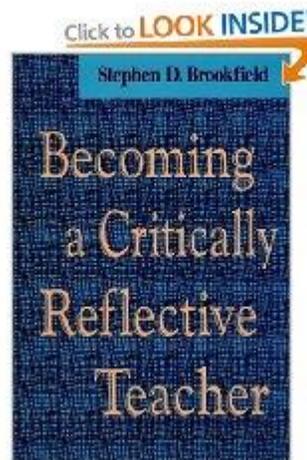


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Talking with fellow trainers/lecturers/facilitators/enablers provides another point of view. Look for people who think differently from you. This way you will be more challenged than only talking with those who think similarly to you!

The Lens of Literature

Reading what others have found or think is a great source of new points of view, new perceptions and ways of thinking about different ideas. It is also another great way to learn about different strategies.





Autobiographical Lens

Brookfield offers a number of possible ways we can use these autobiographical lens. As suggested in the box above, the influences on us as we experienced our own schooling, further education studies, conferences, seminars and training sessions we attend as adults all have an impact on our own teaching. Marland (2007) reminds us that our experiences, beliefs and ideas form our body of knowledge about training, lecturing or facilitating and what it should be. Our experience also informs our body of knowledge about learning and what it should be. This body of knowledge is very powerful in influencing the way we train or facilitate. Marland (2007) also points out that this knowledge is implicit, that it is hidden, or “below the level of the conscious mind” (p.29). Therefore we need to actively take steps to “uncover” this knowledge and examine it in the light of day.

Teacher critical incident reflection questions:

- What was the moment (or moments) when I felt most connected, engaged or affirmed as a trainer/facilitator/lecturer?
- What was the moment when I felt most disconnected, disengaged, or bored as a teacher?
- What was the situation that caused me the most anxiety or distress?
- What was the event that most took me by surprise?
- What do I feel proudest of in my teaching?

Brookfield’s suggestions for how to do this include:

- Keeping a teaching log (there are other options if you do not like to write regularly).
- Video recording your teaching and teacher learning audits are other techniques.

If you wish to learn more about these please see Chapter 4 of Brookfield (1995).

Other autobiographical questions can ask us to reflect on our journeys as learners and then teachers to understand better those experiences that might have shaped us. Having some language around the different paradigms of teaching and learning can help us delve deeper into unquestioned aspects of our practice.



The Lens of our Learners

The “happy sheets” learners complete at the end of a session or module, while providing some helpful immediate feedback tell us little about what is going on the minds of our learners. This is important because it provides us with information about how to teach, why learners find some things difficult, what strategies they are using to make sense of the learning experiences we set up for them and how they interpret our actions and words. Examples of how to get inside the heads of our learners include

- asking learners to tape or write instructions for their successors (future learners taking the same module), and
- using the critical incident questionnaire.

The critical incident questionnaire consists of asking learners the following questions (usually by asking them for written responses, but this could be done as a discussion.)

Critical incident questionnaire for students

- At what moment in the [module/unit/this week] did you feel most engaged with what was happening?
- At what moment in the [module/unit/this week] did you feel least engaged with what was happening?
- What action that anyone (trainer or learner) took this week did you find most affirming or helpful?
- What action that anyone (trainer or learner) took this week did you find most puzzling or confusing?
- What about this [module/unit/this week] surprised you the most?

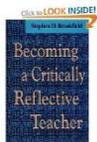
Brookfield, 1995 (p.115)



The Lens of your Peers

We all talk informally with other practitioners about our work. Sometimes too we attend Learning Circles or other professional learning activities. This is helpful as it makes us feel less isolated and often provides reassurance or a different point of view. But to help us uncover our assumptions Brookfield (1995, see Chapter 7) offers some suggestions:

- Set ground rules e.g. every time participants make general assumptions about the nature of teaching or learning, they are required to give supportive evidence for these from their experience
- Use critical incidents: Choose an incident that was a really low or high point for you in the last few months
- Three role structure



The Lens of Literature

As Brookfield (1995) notes theory helps to break the circle of familiarity, prevents group think and helps with naming what we do, allowing us to go “deeper”.

We should always read with a critical eye, asking questions such as: Has the author provided evidence for their claims?” “Does the evidence stand up to scrutiny?” and “Whose interests are being served by this piece of writing?”

A few final thoughts on Brookfield

Brookfield offers one approach to reflection and in particular critical reflection, there are many others. However he does provide useful tools. It is worthwhile considering what would work for you and making it a part of your regular practice.

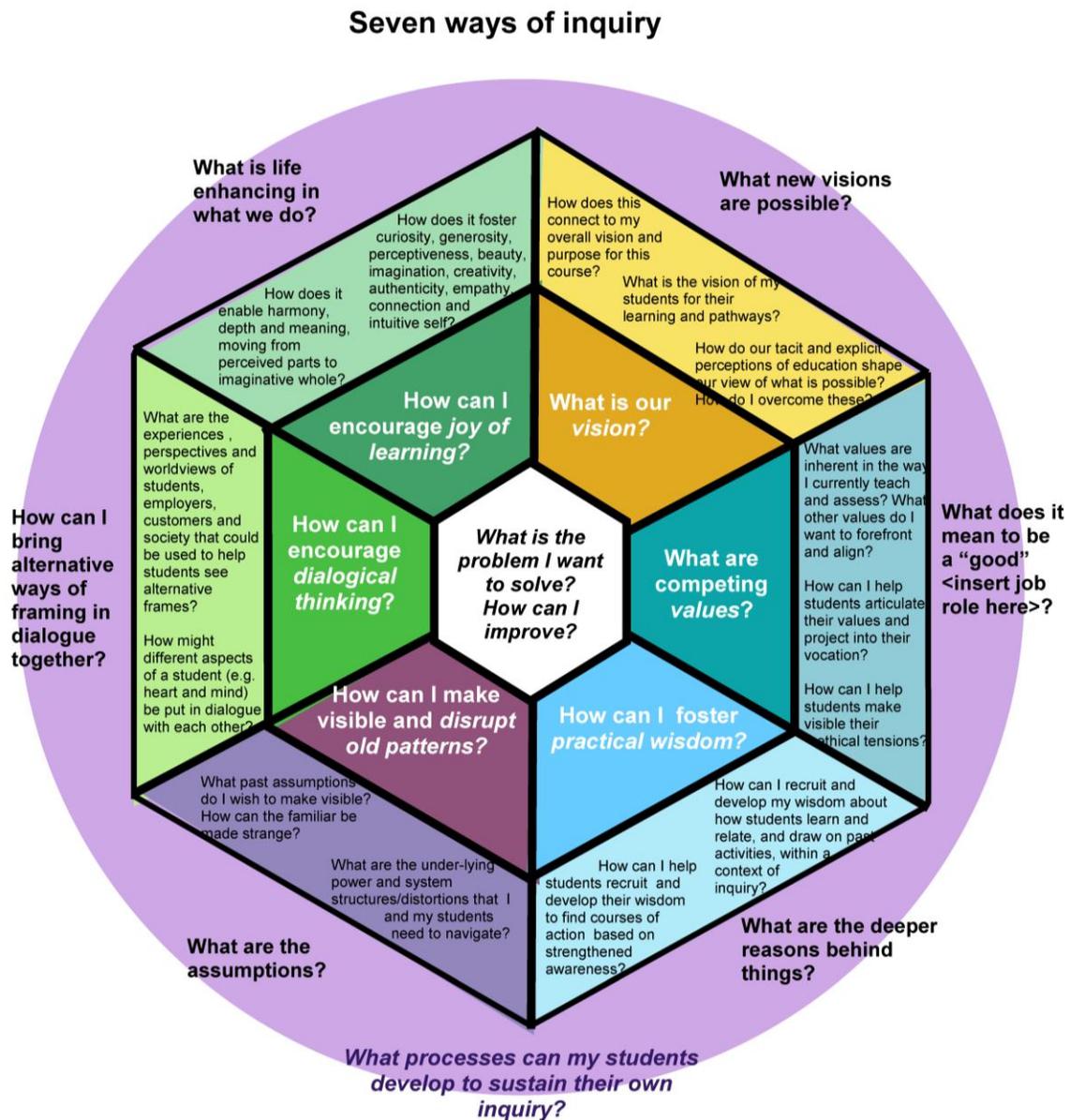
References

Brookfield, Stephen (1995). *Becoming a critically reflective teacher*. San Francisco: Jossey-Bass Publishers.

Marland, P. (2007). *Learning to teach: A primer for pre-service teachers*. Sydney, NSW: Pearson Education.

Seven Ways of Inquiry

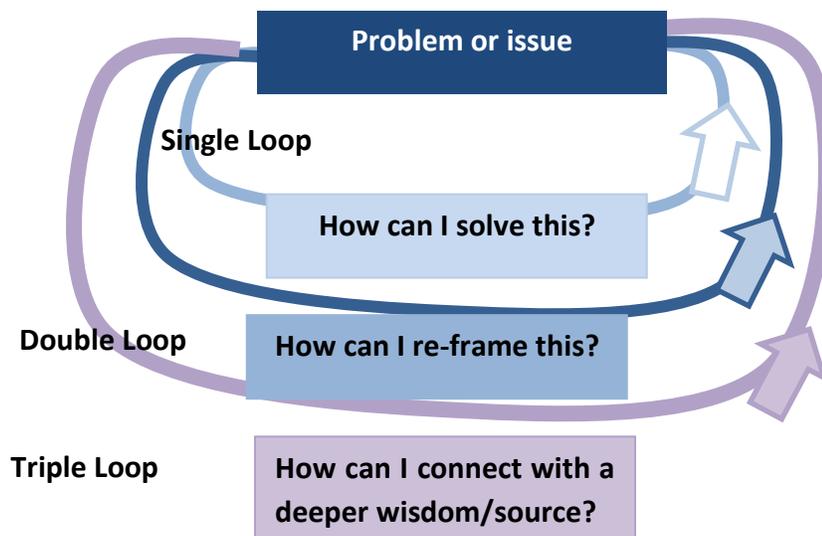
Henderson and Kesson (2004) suggest that critical reflection alone doesn't give us a holistic approach to inquiry. They suggest seven modes of inquiry that work together as a whole. The following has been adapted from their work.



Source: Henderson, J. G., & Kesson, K.R. (2004). *Curriculum wisdom: educational decisions in democratic societies*. New Jersey. Pearson.

Triple Loop Learning

What we have been describing is double loop learning. Triple loop learning adds a third process to reflection – *presencing*.



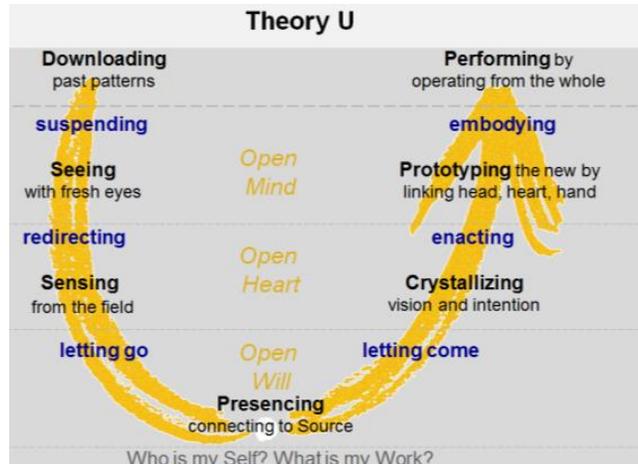
Single loop learning – refers to asking questions of the kind “How can we improve this or solve this?”

Double loop learning refers to a process of reflection or inquiry which challenges assumptions, values, histories and cultures which underlie and shape our practice. In doing it we may find that our values and thinking changes, so we are no longer coming from the same place that we framed the problem in the first place.

Triple loop learning goes a layer deeper. It is about engaging the deep existential self, connecting to our inner wisdom and becoming present to a greater whole. Triple Loop Learning has a transformative capacity which goes beyond developing new cognitive structures, to creating new ways of being, seeing, imagining and relating in the world, allowing the world to give its feedback.

Otto Scharmer has developed a process called the Theory U (or U-turn) which has been used with groups to build new organisational visions which enable a deep understanding of and acting from the whole. It is equally effective for the individual. It helps us let go of old habitual patterns and begin to see with fresh

eyes, tuning into common intents. We then begin to open ourselves to other's points of views and begin to sense a greater whole. Then entering our own stillness we can tap into the "generative flow" and connect with our "authentic self". Moving out of this space we can bring a greater vision which we can begin to prototype, building our capacity to link head, heart and hand and act from the whole.



References

Peschl, M.F. (2007). Triple-loop learning as foundation for profound change, individual cultivation, and radical innovation. Construction processes beyond scientific and rational knowledge. *Constructivist Foundations* 2(2-3), 136–145. URL: <http://www.univie.ac.at/constructivism/journal/articles/CF2.2.pdf> (20.03.2007)

Otto Scharmer: <http://www.presencing.com/tools/u-presentation>

Critical Friends and Dialogical Communities

Critical friends are more than people who talk together; they have particular roles and responsibilities. As we practise being a critical friend our skills increase. Critical friends are useful at different stages of practitioner research projects for:

- articulating the key areas of concern
- helping to reflect on progress, interim understandings and any emerging dilemmas
- helping to create a coherent sense of what was learnt and understood

The role of a critical friend is to help another person to better articulate and explore his or her own issues, ideas or questions. By being a critical friend for another we give our attention to them, in service of this. Sometimes this means listening and drawing out, sometimes it might mean sharing our own ideas and engaging in an inquiring conversation around the person's interests. The critical friend might go away with a deeper understanding and appreciation of the topics discussed, but their key role is to help the other person to achieve this.

Example: This list was generated from the Tools for Learning Design research project based on what participants valued about their critical friends.

Critical friends:

- have knowledge about our specific topic, the processes we are using, or are skilled in being a critical friend
- develop a relationship with us that has sincerity, trust and builds familiarity. Discussions are in confidence
- listen deeply and use silence effectively
- put themselves into our perspective and walk in our shoes
- reflect back to us and help us to articulate and expand what we mean and value by respectful questioning or attending to key comments or body language. They capture our key thoughts through pictures or focus words (mid-wife role)
- provide tactful and timely questions that help us to review our own thinking and processes, surface our assumptions, consider other perspectives, imagine, develop a deeper orientation to what we value, and greater awareness and connection to bigger wholes, so that we can frame new questions and directions coming from these insights
- sense what we are ready for and share their own experience or knowledge appropriately to provide alternate perspectives and understandings, so that we can both inquire dialogically.

Dialogical communities can be an important feature of action research. They could be a community of practice of your peers or they could be stakeholder groups that include members from your workplace management, your team, your learners, and employer groups.

Dialogue is a well-established practice within socio-cultural models of learning to foster understanding. It is a key process in action research not just to enable critical thinking of one's research, but also to build shared commitment among stakeholders.

Through personal conversation, we turn ourselves about and converge or come together... we become transformed as our differing views converge on what is presently beyond us.... and the situation changes or becomes transformed as we go through this convergence process. (Doll, 1993)

What does it mean to foster a culture of dialogical inquiry?

- **Encouraging a unified relationship between inquiry and dialogue** where inquiry happens in dialogue with self and others (Bound, 2010).
- **Fostering a dialogical community of practice** with a particular ethos and supportive culture, enabling vulnerability and disclosure.
- **Encouraging dialogical processes** (explorative, not combative), enabling delving into deeper meanings, exploring alternatives, challenging assumptions and helping one to articulate what is yet to be known. The content and processes of the dialogue become opportunities for people to reflect on their own ways of knowing and seeing. Dialogue becomes "meta".
- **Fostering holistic inquiry** – using all aspects of the self (multiple intelligences, different ways of knowing, learning styles) and providing heuristics and experiences to help this.
- **A dialogical appreciation of complex issues** – the deliberate juxtaposition of different perspectives or ways of thinking, and putting them in play or conversation with each other. Such an approach keeps the tensions and relationships alive, rather than converging to one understanding.

Aspects of good dialogue:

- **ability and commitment to create shared meaning** – construct understandings, shared language, using humour and small talk, creating shared spaces, moving into perspectives of others, engaging in hermeneutic process
- **rigour in process and thinking** – moving around the map of dialogical inquiry cycle into different voices and modes of inquiry, applying critical thinking, iterativeness
- **tuning into the different stages of idea development**, using openness to new ideas and criticality appropriately
- **being inclusive and caring of others** – listening, empathising, giving time, recognising and meeting the different needs of others
- **being self-reflective of the discourse process** – meta-cognition, recognises the limitations, name and challenge what is happening and move to alternative discourse methods.

Stack (2007)

References

Bound, H. (2010). *Reflexive Practitioner Research for Professional Learning in CET*. Singapore: IAL.

Stack, S. (2007). *Integrating Science and Soul in Education: The Lived Experience of a Science Educator Bringing Holistic and Integral Perspectives to the Transformation of Science Teaching*. Unpublished Dissertation, Curtin University of Technology.

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