



Building Researcher Capacity

Handbook 2010

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**NCVER Building Researcher Capacity Community of Practice
Handbook 2009**

Congratulations and welcome to the NCVER Building Researcher Capacity Community of Practice for 2010. This workshop will help you understand the program and clarify any questions or concerns you have.

If you have questions at any time throughout the year, please contact Geri Pancini. Other contacts you may need over the year are also listed.

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Useful websites

NCVER: www.ncver.edu.au

Australian VET Statistics Explained: <http://www.ncver.edu.au/publications/1967.html>.

VOCED: www.voced.edu.au

What is Research?

Here are a few helpful ways to think about research:

Robert Funnell (1996) describes it this way:

Research begins when we try to puzzle our way through something that we have trouble making sense of. We probably 'theorise' our puzzle in talking with others and investigate it through any means at our disposal. To this end, all researchers begin their tasks at the same point by being curious about things that are difficult to understand (p. 46).

Jennifer Allen (2004) suggests that:

[Research is one way] to try and find out what is **actually** going on and, oftentimes, to build on the knowledge base of a particular field (p.5).

In *Researching Post-compulsory Education* by Jill Jameson and Yvonne Hillier (2003), contains a clear and easy outline of practitioner research – research that will help you improve your professional practice.

They suggest seven principles that you can use for your research:

- Principle One - Read up on change processes and impact of research
- Principle Two – Establish your purpose and audience
- Principle Three - Focus your question
- Principle Four - Get the method and timing right
- Principle Five - Be sensitive to the ethics and politics of data collection
- Principle Six - Be Critical in writing and disseminating your findings
- Principle Seven – Target evaluation to measure the impact of your research

We will be focusing on Principles 1, 2, 3, and 5 during the workshop. Later in the year we will come together again to focus on writing and disseminating your findings.

There are many other helpful books and articles about research (see Reference List at the end of this Handbook).

What is Action Research?

The aim of action research is “to arrive at recommendations for good practice that will tackle a problem or enhance the performance of the organization and individuals through changes to the rules and procedures with which they operate” (Denscombe 2002, p. 27). Action research aims to improve our practice and our understanding as practitioners about an issue, or problem.

Action Research is not a method.

Instead, it uses a variety of methods (e.g. case studies, interviews, focus groups, surveys etc.) to improve something in our workplace operations or programs. The methods we use will depend on what we are trying to improve.

Action research is often described as a spiral of self-reflection:

- plan action
- implement the action
- observe the action
- reflect on the action (Kemmis & McTaggart 1988).

Often we need to repeat this loop of plan, act, observe and reflect as we go (Zuber-Skerritt, p. 15, 1992).

Jameson and Hillier discuss action research in *Researching Post-Compulsory Education* in the first section of their book.

For a good website on action research go to:

<http://www.scu.edu.au/schools/gcm/ar/arhome.html>

Method & Methodology: Same or different?

This can be a little tricky to understand. Both are fundamental to understanding the research process, but neither is simple or straightforward. Let's start with a simple definition.

Gill (1996) puts it like this: ‘Method is concerned with the techniques of data collection and methodology consists of a theoretical rationale for proceeding with a particular method (p. 32).

Methods: how we go about collecting data.

For example, are you using case studies, surveys, observations, focus groups or several of these methods etc? Put simply, how will you collect your data? What ‘tools’ will you use?

Methodology: The theoretical process behind the method.

Methodology refers to the theoretical rationale for selecting one method rather than another, or using a combination of methods instead of a single method.

Some Key Terms

Here are a few definitions and key terms that are often in the research literature. These are very basic starters. Each can be followed up more by using the sources suggested along the way or references at the end.

Three broad types of research: quantitative, qualitative, and mixed methods

Quantitative research is characterised by the use of tools and techniques that are numeric. The process of measurement is central to quantitative research. It provides facts and the relationship of one set of facts to another. As a brief example, quantitative research takes the form of experiments, surveys, and statistical analyses.

In summary, quantitative research

- Uses numbers for analysis
- Is usually large scale
- Uses standardized instruments (Kervin et al. 2006)

A good explanation on quantitative methods for the beginner can be found in Chapter 25 'Elementary Quantitative Methods' by Cathy Lewin in the book *Research Methods in the Social Sciences* by Somekh & Lewin (eds), (2005).

Qualitative research tends to be multi-disciplinary. It aims to develop an in-depth understanding of behavior and why the behavior happens the way it does. It researches the *why* and *how* not just *what*, *where* or *when*. This means it uses smaller samples but takes an in-depth look at the samples. It may include case studies, interviews, document analysis, and media analysis to name a few.

In summary, qualitative research:

- Uses texts or images
- Uses small-scale data collection
- Uses loosely structured or non-standardized interviews (Kervin et al. 2006)

Mixed Method research refers to 'mixing' or combining qualitative and quantitative approaches in the research. For example, you might carry out a large-scale survey and then follow up some of the respondents with interviews. Or you may want to highlight aspects of statistical findings with the addition of case studies. Your research may have a quantitative phase and a qualitative phase. Some research questions will call for both types of research.

Kinds of qualitative research

Case Study

A case study strategy is considered both a method and a methodology.

A case study strategy is preferred when the inquirer seeks answers to how or why questions, when the inquirer has little control over the events being studied, when the object of study is a contemporary phenomena in a real-life context, when boundaries between the phenomenon and context are not clear, and when it is desirable to use multiple sources of evidence.

(Schwandt, p. 22, 2002)

A comprehensive discussion on case studies can be found in the following sources:

Norman Denzin and Yvonna S. Lincoln (eds) 2005 *The Sage Handbook of Qualitative Research* (3rd ed), Thousand Oaks, CA, Sage Publications.

Robert Yin, 2004, *The case study anthology*, Thousand Oaks, CA, Sage Publications.

Interviews

Interviews are the opportunity to discuss and ask questions about a topic. They can be structured, semi-structured or unstructured. Interviews have become popular as an adjunct to participant observation (see below) especially when time constraints meant there was less time for long term observation.

Focus Groups

A focus group is research that asks groups of participants their opinion on a topic. This type of qualitative research is often used in marketing and politics to gather and assess popular opinion. They have also become popular in education. According to Barbour and Schostak (2005) focus groups are increasingly used by researchers 'as they can access group norms and provide insights into the formation of views which cannot be so readily achieved via individual interviews (p. 42).

For more information on interviewing and focus groups see:

Barbour, R & Schostak, J 2005, 'Interviewing and Focus Groups' in Somekh and Lewin (eds) *Research Methods in the Social Sciences: A Guide for students and researchers*, Thousand Oaks, CA, Sage 41- 48.

Participant Observation

Participant observation is usually a long-term observation in a single setting such as a school or a workplace.

The emphasis in the field work is very much on coming to know the 'insider' perspective by observing participants going about their 'ordinary business' in their 'natural' setting – that is to say by long term immersion in the 'field'

(Stark & Torrance p. 34).

Ethnography

Ethnography is the research approach used by cultural anthropologists when studying groups of people. Ethnographers use a variety of methods but tend to follow these 4 tenets:

Participant Observation - Ethnographers spend time with people as they go about their daily lives, learning how they live by actually doing what they do.

Natural Setting - Ethnography is conducted in the space where participants actually live, work and play, not in a separate research facility.

In Their Own Words - Ethnography research findings are delivered in the words of the participants, using their language and intonation.

Holism - People's actions and thoughts are influenced, directly or indirectly, by absolutely everything in their lives. Ethnographers stay open to all potential connections.

http://www.contextresearch.com/context/about/about_what.cfm

Before moving on from the topic of method and methodology, here is a quote from Michael Crotty that helps to sum up this often confusing area. Taken from Chapter 1 of his book *The foundations of social research: meaning and perspective in the research process* (1998) it is a good source for teasing out these issues if you are interested. However, it can get very theoretical along the way - but if you are keen - it's worth a look. Crotty says:

Research students and fledgling researchers - and, yes, even more seasoned campaigners – often express bewilderment at the array of methodologies and methods laid out before their gaze. These methodologies and methods are not usually laid out in a highly organised fashion and may appear more as a maze than as pathways to orderly research. There is much talk of their philosophical underpinnings, but how the methodologies and methods relate to more theoretical elements is often left unclear. To add to the confusion, the terminology is far from consistent in research literature and social science texts. One frequently finds the same term used in a number of different, sometimes even contradictory, ways.

(Crotty 1998; p. 1).

Your research proposal

A research proposal means you have to explain publicly what your research is about, why it matters and how you will go about it – in terms of methodology, method and ethics.

Your research proposal could include the following. However, you may not have all of these and they do not have to be in this order

- Brief background rationale for the topic
- The research question(s)
- Outline of your Literature Review
- Design and Methodology
- Rough timeline with milestones
- Reference List

Thinking about your proposal:

1. Write down your topic – as you see it now.
2. List (dot points) how you are thinking you will research this topic. Include who and what you will research.
3. What kinds of methods will you use?
4. Can you rough out a time frame?

Now, looking back over the information so far:

1. Do you have clear boundaries or definitions to let you deal with the topic convincingly? Should you narrow it down?
2. Do you have a series of things you are thinking about doing or does it hang together?
3. Can you explain to yourself and others why this will work as a study?
4. What are you unsure about at this stage in terms of the topic or your focus?

What is a Literature Review?

A literature review describes the history of research (usually, the different lines of research) converging on your topic, organising them in such a way as to show how your research adds to what has already been done in the past.

It is not just a collection of summaries – that is an annotated bibliography. It should ‘review’ and evaluate the published ‘literature’ – the research articles and books – on the topic of your research in such a way that your proposed research seems the inevitable end-point. It interprets the published literature as leaving a hole or uncertainty that calls for your research.

Purpose

Your Literature Review shows

- you know the history of research relevant to your topic
- you know how your research ‘fits’ into the current state of play
- you are showing your work can make a contribution to the discussion, debates and directions in the issue

Organising your Literature Review

A Literature Review should be organised in terms of categories, themes or trends. It should refer to at least 2 or 3 texts within each category.

- Chronologically - from early work to more recent
- Methodologically – surveys suggest X or other action research as found...
- Theoretically - sociology says X or social theory says Y
- Contextually – In Australia, research in VET... In multi-sector settings...

Locating information

You need to find your research 'literature' - the articles and publications relevant to your research - in the usual opportunistic way. Library databases and Google are obvious starting points. **Google Scholar** gives wide access to academic journals. It also provides citations so that you can see if later researchers have used that article as background for their research.

Reference Lists at the back of articles are also a good source of search terms for Google Scholar or Library Databases. If an article is helpful, then the books or articles that the author drew on may be helpful to you too.

Tip: Once you have found some search terms that assemble the potentially relevant publications for you, enter these same search terms in Google Scholar this time adding '**review**'. This should find any Review Articles, which, like your literature review, are organising the history of research into a story in order to identify fruitful lines of future research. The categories they use for organising their history of research may give you ideas for creating the categories to organise the history of research behind your research.

University websites usually have a page on Literature Reviews. Try the website of your local university, or one of these:

Monash University:

<http://www.monash.edu.au/lls/llonline/writing/general/lit-reviews/index.xml>

University of South Australia:

<http://www.library.unisa.edu.au/infoskills/litreviews.asp>

Purdue University has quite a comprehensive on-line writing lab at:

<http://owl.english.purdue.edu/owl/>

For specific information on conducting research go to: <http://owl.english.purdue.edu/owl/resource/559/01/>

And Finally:

Barbara Kamler and Pat Thompson (2006) conducted research on the metaphors and images from their students. When thinking about writing their literature reviews students used these images. Here are some of the results:

There were lots of water metaphors:

A chaotic whirlpool
An ocean full of sharks
A stormy ocean

Not being prepared metaphors:

Trying to swim with concrete blocks on my feet
Setting off across the ocean in a canoe

Puzzle/maze:

Walking into a tunnel
Walking in the dark
Going through a maze in search of hidden treasure

Pain and discomfort:

Pulling teeth
Sweating blood
Being hit by a truck
Sinking in quicksand

Animals:

Eating a live elephant
Persuading an octopus into a glass (this one became the title of Chapter 3 in Kamler & Thompson's text)

More benign images:

Collecting seashells
Digging in the ground for precious metal
Building a brick wall, laying down one brick at a time until this magnificent wall has been created
Looking into a kaleidoscope, a mosaic which keeps shifting

These, of course, are attempts to capture the range of feelings we have writing a literature review. They are here just to remind you that if you feel like any of the above, it's not just you! These are common feelings and as you work through the literature review section of your research, you will hopefully get to the stage of seeing the 'magnificent brick wall' you have created.

Research Ethics

Use this checklist to help you to ensure that your research is ethical.

Planning	Issue	Action
	Have you clarified your expectations of your research with your Supervisor? Have you thought about who you have to get consent from e.g. the students, teachers, employers or agencies? Have you identified any conflicts of interest in your research?	

Preparation	Issue	Action
	Have you sought permissions from all those involved in your research and checked whether participants wish to remain anonymous or not? Have you given all those participating in the research adequate information about the project aims and purpose? Have you developed strategies to ensure confidentiality and privacy? Have you developed a timeline and made all the necessary contacts to ensure least disruption possible?	

Collection	Issue	Action
	Have you ensured privacy by gathering only the information you need? Have you ensured least disruption possible to all concerned? Have you stored your data safely to ensure confidentiality and privacy?	

Analysis & Reporting	Issue	Action
	Have you written your findings accurately using non- discriminatory language? Have you avoided bias and assumptions? Have you avoided plagiarism by attributing all information? Have you acknowledged all participants (within the constraints of privacy)? Have you obtained copyright clearances, if you have used other people's material?	

Dissemination	Issue	Action
	Have you given all stakeholders feedback? Have you disseminated the report to all sponsors/stakeholders? Have you stored a hardcopy and digital copy of all disseminated reports/papers securely?	

Modified and adapted from: CIT Research Handbook
http://www.cit.act.edu.au/about/centres/education_excellence/research/research_handbook/
Downloaded 22/4/09

Key ethical considerations for researchers

- Informed Consent - researchers must obtain a signed consent form from participants before they take part in research
- Justice - researchers must ensure that participants' benefits from the research are greater than the burden, and that there is no conflict of interest
- Harm avoidance - researchers must ensure minimum harm, risk, discomfort, disruption and inconvenience to participants
- Respect - researchers must ensure respect for people's rights, welfare, cultural heritage, beliefs and individuality
- Privacy and confidentiality - researchers must seek approvals to conduct research, must inform participants about confidentiality arrangements, must ensure participants know of their right to remain anonymous, and must store and present information respecting its confidentiality
- Young people - if a participant is under 18, researchers must advise both the primary caregiver and the participant of the nature of the research, and ask them to sign an informed consent section on the consent form; principal researchers must also sign a form declaring their awareness of special responsibilities in dealing with young people
- Intellectual property - researchers must acknowledge others' roles in research, whether as authors, research assistants, students or providers of facilities.

Modified and adapted from: CIT Research Handbook

http://www.cit.act.edu.au/about/centres/education_excellence/research/research_handbook/

Downloaded 22/4/09

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Websites

Trochim, W. M. (2002) [The research methods knowledge base](http://www.socialresearchmethods.net/kb/). 2nd ed.

<http://www.socialresearchmethods.net/kb/>

Free resources for program evaluation and social research methods:

<http://qsociology.icaap.org/methods/>