Qualitative Methods: An Introduction

Qualitative Research: Gathering Data

- Data Gathering
  - Observations
  - Questionnaires
  - Interviews <– focus upon this

The nature of Qualitative Data

- Numbers
- Text (words, punctuations and other symbols/scratches)
- Pictures
- Video
- Audio
- Other

Gathering Data – common field techniques

- Interviews (video, audio, notes)
  - Individuals & groups
  - Unstructured or highly structured (mixed method)?
- Observations (video, audio, notes)
  - Passive
  - Active
  - Secondary sources
- Questionnaires
- Focus groups
- Case studies

Some Interviewing Questions

- Experience/behaviour questions –
  - what a person does or has done
  - If I had been here that day what experiences would I have seen you having (ethnography type question)
- Opinion/value questions: what the person thinks about an experience which reveals a persons intentions, goals and values
- Feeling Questions: do you feel anxious happy afraid
- Knowledge Questions
  - Information about what he person considers factual (tell me what you know about)
- Sensory questions: describe how you see the world around you (e.g. does the counsellor greet you when you arrive in her office?)
- Background description question

Group or Individual Interviews ? Individuals...

- Most common
- Relatively easy to arrange
- Data analysis is easier to manage as the data arises from one source (respondent)
- Relatively easy to control and manage agenda
- Can get at more controversial opinions or concerns

Group or Individual Interviews ? Groups

- **Normally about four to six people**
- **Can uncover richer data through the groups discussion**
- **Helps to reveal consensus views**
- **Allow participants to challenge each others' views verifying ideas gained from other methods and enhance response reliability**
- **Bias:**
  - **Some people can be drowned out**
  - **Gender issues (men tend to 'hog' the centre stage – Denscombe (2003))**
  - **Status issues**

E.g. Focus Groups

- Very popular form of interview
- Between 6-9 people typically
- 1 moderator
- Explores attitudes, perceptions, feelings and ideas about a topic
- Sessions revolve around a prompt or trigger introduced by the moderator to focus attention
- Less emphasis on need for moderator to be neutral than in other interview techniques
- Collective view is especially valuable rather than individual points of view
- Good for non-controversial and quite good for controversial subjects
- Difficult to record (people interrupt each other and talk at the same time)
- People may be reluctant to express their personal views in group context
- Can become bullying (moderator needs skill here)

Case Studies

- This is the "study of the particular, the unique"*
  - **It is not generalisable! This must be understood and clearly indicated in the thesis.**
  - **Can be good for "how" and "why" RQs where the researcher has no control over events as they unfold**
  - **For example: how was a complex software project successful under conditions in which it should have failed?**
- The essential task is to uncover the uniqueness of some case in relation to other cases.
- A case is a "specific, complex , functioning thing"**. For example....

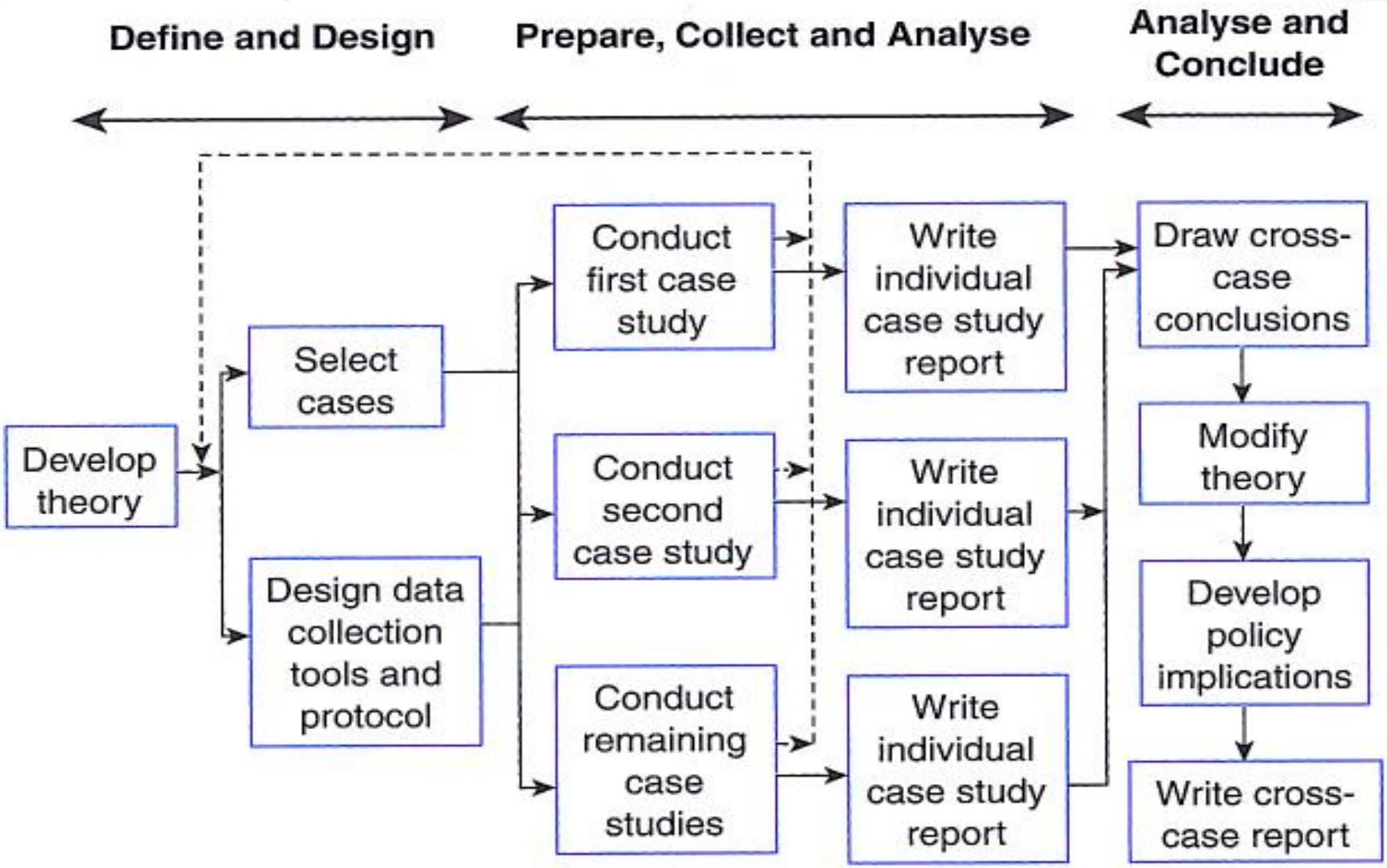
•H. Simons (2009). *Case Study Research in Practice*, Sage: CA.
•** R. Stake (1995). *The Art of Case Study Research*, Sage: CA.

In computing-related research cases have included

- A person
- A country
- A system
- A classroom
- An institution or organisation
- A policy
- A software development project
- A technology

...and may include single or multiple cases...

Multiple Case Study Research Design Example: Overview*



*Adapted from Gray (2009). Doing Research in the Real World, Sage: CA p. 251

Case Study data

- Typically consists of multiple data sources
- Here is a typical process for case study construction

Stage 1: Assemble Raw Case Data

- **Consists of all data collected about the case**
- **Case studies usually generate a lot of data (including quantitative and qualitative)**

Stage 2 (optional but usual): Construct Case Record

- **Organise, classify and edit raw data (condensing it) – see the coding strategies we encountered earlier**
- **Must clearly demonstrate that data is collected without bias and systematically**

Stage 3: Write up case study narrative (which may be the same as the output from stage 2)

Chain of Evidence →

Criticism of Case Studies

- Main issue is **generalisability**
- Some scholars are wary of case studies as reliable ways of reaching generalisable (thus, any) conclusions about hypotheses
- **You will need to address this point in your thesis if you use a case study, and show that you understand the precarious nature of case data.**
- The reply is that, as most experimental methods also require multiple repeated experiments before the evidence is universally accepted as reliable, cases studies may be thought to provide tentative evidence for or against a hypothesis. Multiple, future case studies will validate or otherwise the hypothesis.

Summary: Qualitative Studies...

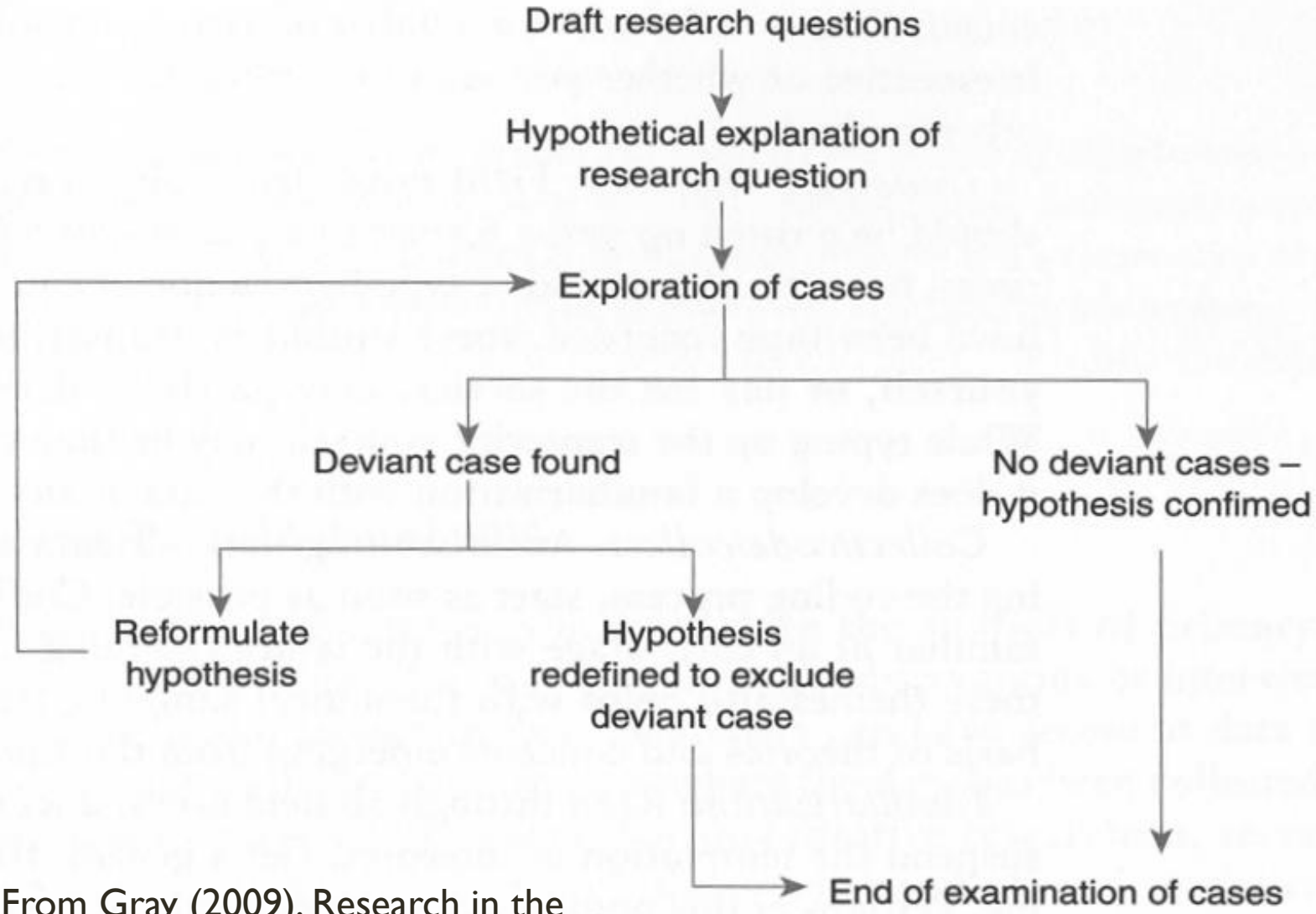
- Produce a lot of data
  - which takes many forms (we are mainly focussed upon non-numeric data)
  - can be gathered in many ways
- Qualitative data generated by case studies, interviews and other sources may contain a lot of text
- How do we process this kind of data?
- Next section....

MORE ON INDUCTION FROM QUALITATIVE DATA: CODING TEXT

Analytic Induction

- Recap: Induction typically involves the collection and analysis of data from a number of individual cases to identify patterns and, from there, the development of conceptual categories
- Analytic induction is, in a sense, a search for 'deviant cases' i.e. Those cases or evidence that do not support tentative hypotheses
- There are defined stages starting from, for example, definition of research questions and tentative hypotheses then an examination of the cases to see evidence supporting or otherwise the hypotheses.....

A Qualitative Inductive Research Process



From Gray (2009). Research in the Real World, Sage, p. 495)

The Handling of Data: A Coding Process for Text Data

1. Transcription: type things up (field notes, reflections, interview notes, observations etc.)
2. Collect/code/collect:

   Avoid waiting till all the data is collected before coding: underline main concepts, issues etc. Start as soon as possible.

   It helps to identify the issues emerging from the data and may shape the sampling process (selecting new cases on the basis of emerging theories, categories or concepts)

   Familiarisation: try to avoid interpreting the data, but familiarise yourself as much as possible with it (doing the above steps yourself will help).

   At this point make general notes in your journal for later

The Coding Process contd.
3. Focussed Reading

Similar to coding above but more focussed and intensive.

Again underline the key words or phrases bearing in mind codes etc. above.

Make notes in the margins.

Allot a word or phrase (code) summarising the pertinent point.

Focus especially upon passages that throw up the unexpected, deviant.

The Coding Process contd.
4. Review and Amend Codes

On this second reading review and amend the codes as needed.

If two or more codes seem to refer to the same thing, revise.

If a code relates to a concept in the literature, revise.

Consider: Are some codes hierarchical (category-> subcategory)? Can be useful if constructing a knowledge base (for example) for a machine learning or other intelligent application

The Coding Process contd.
5. Generate and Revise Theory

1. Identify connections between concepts, categories and codes.
2. Do they amount to theoretical principles?
3. Do they speak to theory in the literature or that you have set out in your hypotheses?
4. Are any concepts arising that fit into your predicted categories (as per hypotheses)?
5. Are there any new (unforeseen) categories?
6. (Re)Develop your theory and return to the data (or data gathering) and the literature.
7. Does any evidence you gather support your revised theory?

Software Tools for Conducting this Process

Example: nVivo: An Overview

Qualitative analysis of textual & audiovisual data sources:

1. Collecting and importing data.
2. Organizing and coding data.
3. Assigning attributes to data (e.g., demographics) for comparative purposes.
4. Adding interpretations and notes.
5. Querying and searching data.
6. Visualizing data.

In Recent Computing Research: Organ and Stapleton (2017)

NB: In practice there can be a long learning curve with nVivo

Criticism:

This approach tends to fragment the data (you can miss the forest looking at the bark)

Bear this in mind!

SOME NOTES ON ETHICS

10 Questionable Research Practices

- Involving people without their knowledge and consent
- Coercing people to participate
- Withholding information about the true nature of the research
- Otherwise deceiving the participant
- Inducing participants to commit acts diminishing their self-esteem
- Violating rights of self-determination (e.g. in studies seeking to promote individual change)
- Exposing participants to physical and/or mental stress
- Invading privacy
- Withholding benefits from some participants (e.g. in comparison groups)
- Not treating participants fairly, or with consideration or respect

For more discussion see
Kimmel, A.J. (1988). Ethics and Values in Applied Social Research, Newbury Park: CA.

Ethics Checklist (from Gray (2009). *Doing Research in the Real World*, Sage)

- **Privacy: the right not to participate, to be contacted at a reasonable time and withdraw at any stage**
- **Promises and Reciprocity: what do participants gain from cooperating? Keep promises you make (offering a copy of the report etc.)**
- **Risk: will your research stress peoples psychologically? Legal liabilities? Political repercussions? How will you deal with these risks?**
- **Confidentiality: what reasonable promises of confidentiality are needed? Can you honour them? How?**
- **Informed Consent: what kind of formal consent is necessary? How is to be obtained?**
- **Data access and ownership: Who will have the data and who owns it? Is this specified in the research contract?**
- **Impact upon Researcher : How will you be impacted by the study? Will you need debriefing?**
- **Advice: will you need a confidant (e.g. on ethical issues arising in the work)? Who?**

Some Theories of Ethics

- Consequentialist: focuses on consequences of actions, regardless of motivation or other factors.
- Deontological: consideration of duties and obligations, independently of consequences.
- Normative ethics: autonomy, beneficence, (distributive) justice.
- Virtue ethics: actions which build good character.
- Ethics of care: context based approach to preserving relationships.

Summary and Conclusion

- Ethical considerations are paramount in activities across a wide variety of areas
- Ethics is a formal discipline which can be studied
- Ethics is central to sustainable human existence on Earth

- **Ethics & research**
  - **you need a statement on the ethics of your research – usually in Chapter four**

ETHNOGRAPHY – FOR REFERENCE ONLY

A Qualitative Approach: Ethnography

- Ethnography literally means a description of people or cultures (from *ethno* and *graph*)
- Originated in social anthropology
  - focused upon producing a detailed and permanent account of cultures and lives
  - Typically small, isolated tribes which were often seen as endangered
- Concerned with 'the totality of all social, cultural and psychological aspects of the community' (Malinowski (1922) p. xvi)

Ethnography focuses upon…

- Spending considerable time in the field among the people whose lives and culture are to be documented
- Routine and normal aspects of everyday life which are of as much interest as significant incidents
- How the target population sees and understands their world and what meanings they attach to things
- The inter-linkages between features of a culture (avoid isolating facets from the wider context in which a facet exists)
- Creating a ‘final account’ which is more than just a description, but a construction which employs particular writing skills (telling the story fo their lives or the life of the ethnographer in that context).

Ethnographic accounts typically contain…

- Lifestyles and meanings: understandings of things from the perspective of those involved
- Comparisons and contrasts: early ethnographers primarily concerned themselves with describing cultures that were different from their own in order to illuminate aspects of their own culture
- The exotic and the routine

Example of an ethnographic study

Geertz, C. (1988). 'Deep play: Notes on the Balinese Cockfight', in Johnson, O. (ed.), *Methodology and Accounting Research*, pp. 175-233.

See handout and discuss.

Some Criticisms

- Detached observer? Can we really see things ‘as they really are’? (Hammersley (1992))
- Isn’t this a bit voyeuristic?
- Naturalism versus reflexivity – aren’t these opposed?
- What about the relationship between the researcher and the account?

ACTION RESEARCH: FOR REFERENCE ONLY

Action Research (AR)

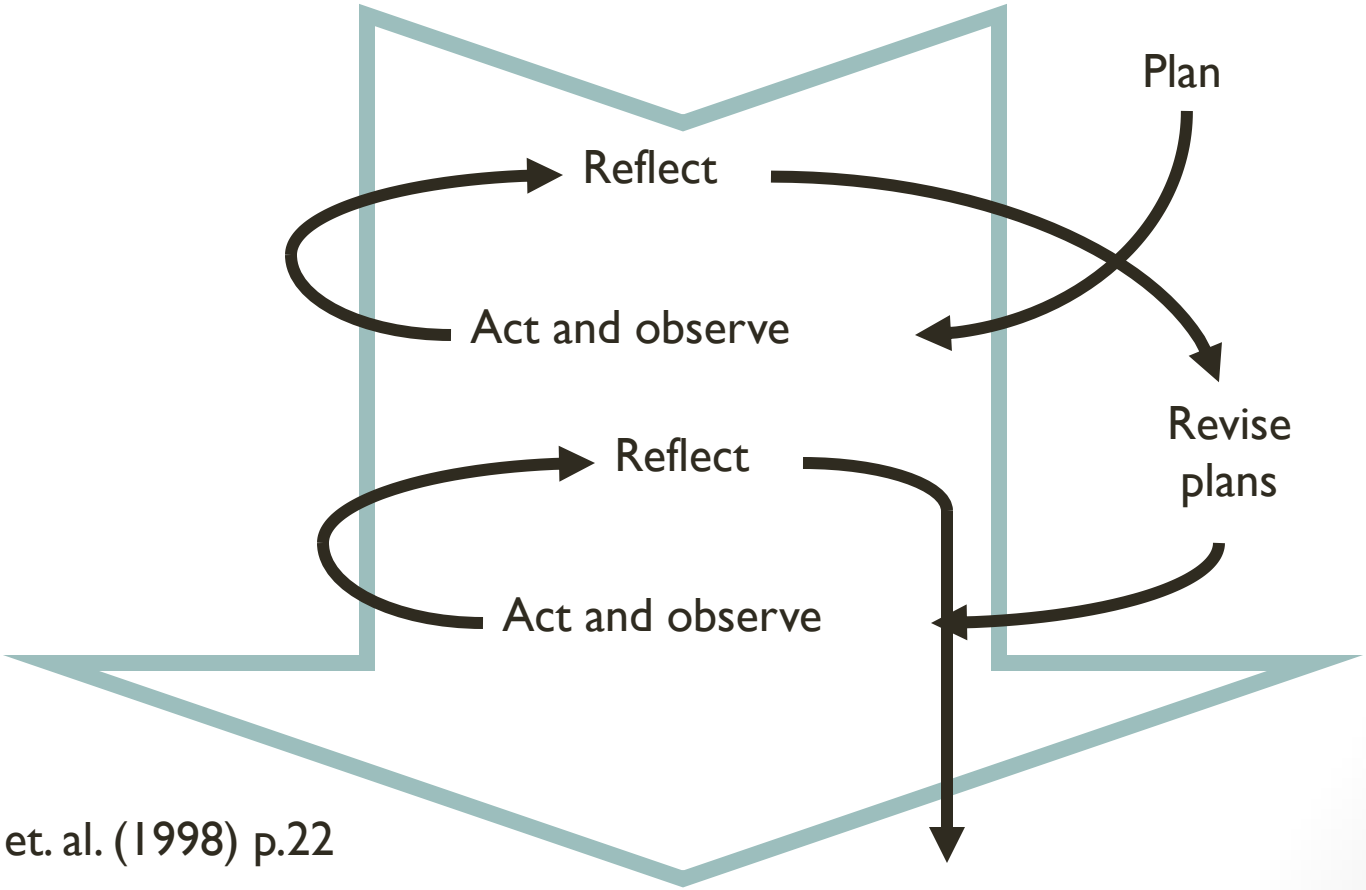
- Involves members of communities (e.g. business organisations) and researchers together and benefits all involved in the study
- Recognises the intervention of the researcher and studies this
- Internal group initiatives and insider knowledge are very important
- Involves the co-generation of data and analysis together
- Typically aimed at transforming a situation in a democratic direction
- Action-knowledge oriented (from Hart & Bond (1995)
  - Producing practical solutions
  - New knowledge is in this context and produces insights for both researchers and practitioners
  - Problem centered, context specific and future oriented
  - Involves a change intervention
  - Is cyclic – research/action/evaluation are interlinked
- Very popular for studies in social care, education, organisational studies and health research

The purpose of AR is always and explicitly to improve practice

(Griffiths (1998) p. 21)

Normative Research is similar in this respect

The Participative AR Spiral



Atweh et. al. (1998) p.22

Some Problems with Action Research

- Is it just consultancy writ up as research?
- Is it rigorous, can't anything pass as action research?
- It is very demanding (although very rewarding too) and should NOT be entered into lightly
- Others? Ethical conflicts?

Never use action research to:

- Drive an unpopular policy through
- Experiment with different solutions without thinking it through very carefully (especially in terms of ethics)
- Manipulate employees or practitioners into thinking they have contributed to a policy decision that has already been made
- Bring a dysfunctinoal group together (if in doubt – don't! It will be disruptive and very time consuming with limited usefulness for anyone)
- Bolster your flagging career: AR will expose your weaknesses very quickly!

(from Morton & Cooper (2000))