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Consultancy Project

Primary Research Skills:
Research Methodology recap
Collecting Data - Sampling



Last time



1. Recapped PID structure/format
2. Began to assess the importance of change in organisational consultancy

Reminder – The Project's key stages

- Bid for work
- Ethical approval (Form E3)
- **Plan research methods in detail**
- Submit PID & E3 form by 16 March
- PID feedback
- Undertake research
- Analyse findings
- Brainstorm with client
- Present findings and informed ideas
- Report
- Action!
- Feedback/analysis
- Does the project achieve the PID goals?

Today's objectives

- To review the basics of research methodology
- To identify and evaluate different sampling techniques and strategies to choose the research respondents
- To acknowledge sampling requirements
- To identify and review the different sampling techniques and strategies and their appropriateness for different situations
- To highlight issues arising from sampling procedures
- To determine an appropriate strategy for the research project

Do you want the good news
or the
bad news?





This is not the dissertation so
no full RM chapter required

BUT.....

**JUSTIFY
YOURSELF**

Activity – Recap questions...in pairs:

1. What is research?
2. What is research methodology?
3. What is the difference between primary and secondary research?
4. What is the difference between quantitative and qualitative research?

What is research?

- People undertake research in order to find things out in a systematic way, thereby increasing their knowledge (***Jankowicz, 1995***).
- ***Hussey and Hussey (1997, p. 1)*** define research as '*enquiry and investigation [that]...is systematic and methodical...[and] increases knowledge*'.

What is research methodology?

- Research **methodology** refers to the *step-by-step research process*; the selection of the most efficient ways to collect, analyse and present data whilst maintaining academic rigour.

‘an operational framework within which the facts are placed so that their meaning may be seen more clearly’.

Leedy (1989), cited by Remenyi et al, 1998, p. 28)

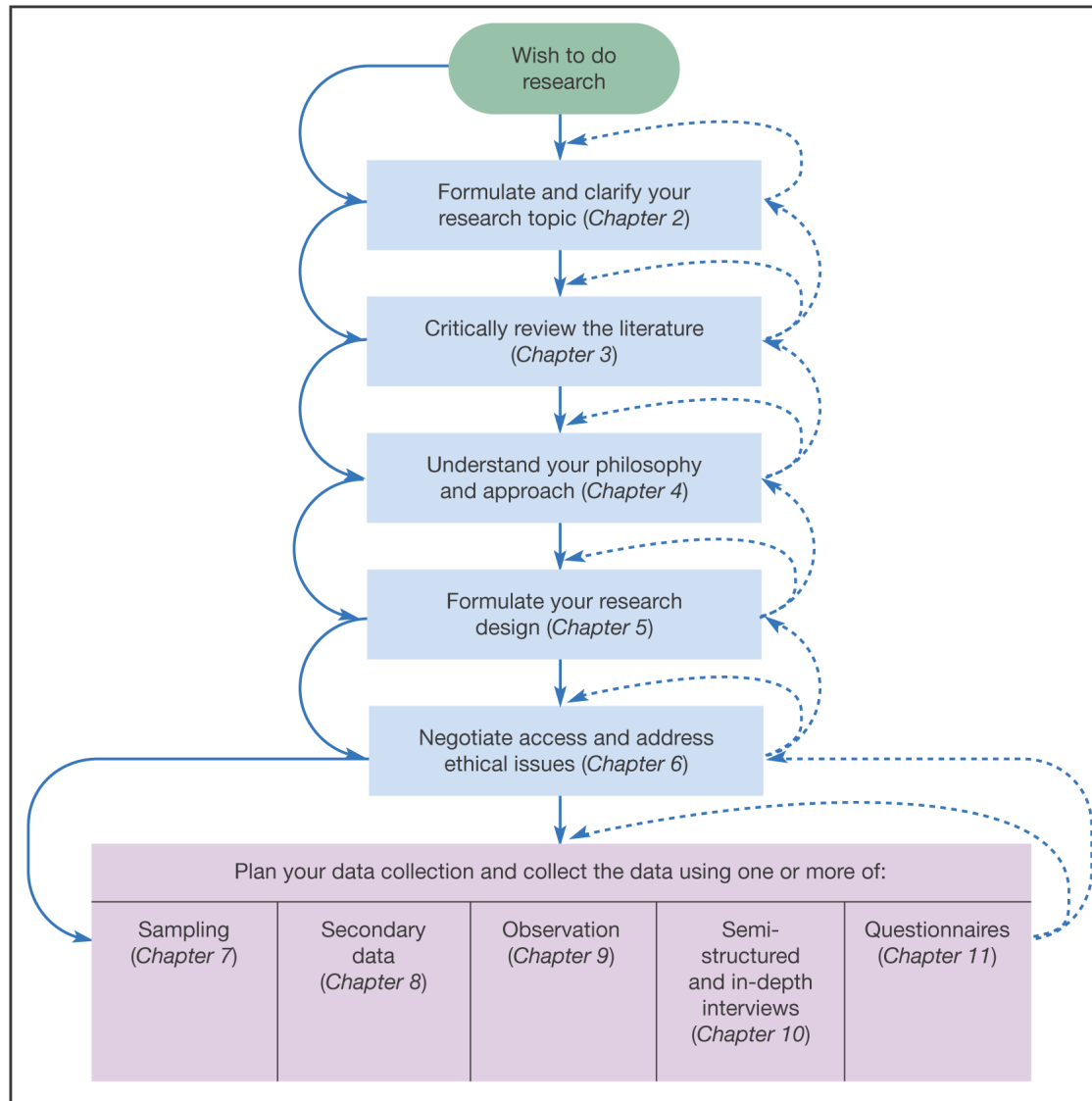


Figure 1 The research process

Source: © Saunders, Lewis and Thornhill, *Research Methods in Business*, 4th Edition © Pearson Education Limited 2007

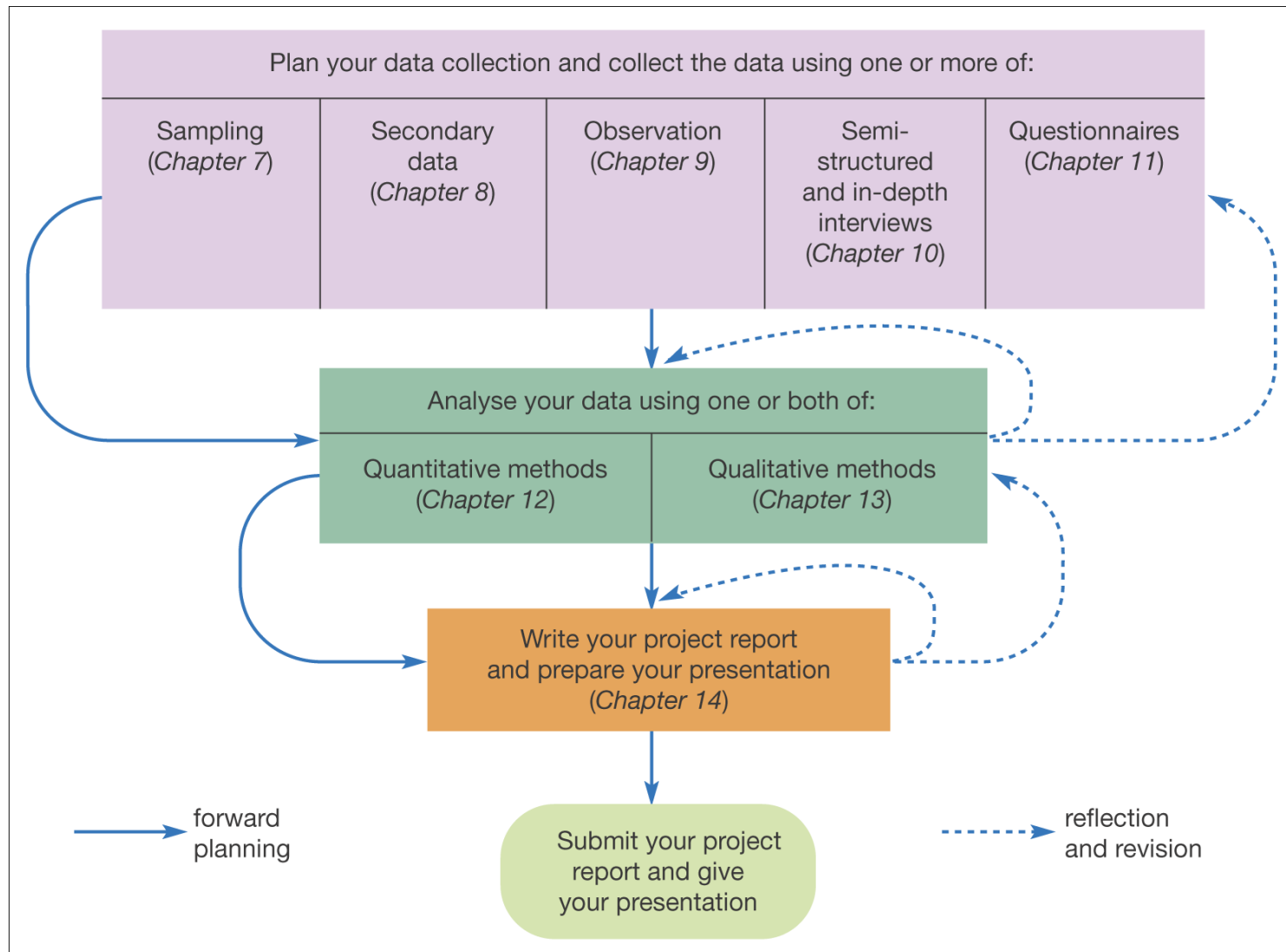


Figure 1 The research process (Continued)

Source: © Saunders, Lewis and Thornhill, *Research Methods in Business*, 4th Edition © Pearson Education Limited 2007

So research has a purpose... : 3 kinds

1. Exploratory

- undertaken in order to collect preliminary data to help clarify or identify a problem, rather than for generating problem solutions.
- Purpose is to make an initial assessment of the nature of a problem, so that more detailed research work can be planned appropriately.

2. Descriptive

- aims to provide the researcher with a better understanding of a particular issue or problem
- For example, assessing the search behaviour of users of a particular website and the reasons behind the behaviour exhibited.

3. Explanatory (causal or predictive)

- seeks to establish cause and effect relationships.
- emphasis here is on studying a situation or problem in order to explain the relationships between variables.

What is the difference between primary and secondary research?

- **Primary research** (or field research) the collection of original (new) data *by the researcher* to address a specific problem.
- **Secondary research** (or desk research) is based on data that has been collected *by somebody else* for some other purpose (and for this reason, it may not precisely meet the needs of the secondary user).
- However, it can help the researcher gain understanding of an issue, and formulate and generate ideas, which can later be refined by carrying out primary research.

What is the difference between **quantitative** and **qualitative** research?

- **Qualitative research** involves the collection of (soft) data that are open to interpretation, for example, people's opinions which cannot be generalised in numerical terms.
- **Quantitative research** – research that produces statistics (hard data). This usually involves surveys of large numbers of respondents.

Activity

- How many ways can you think of to collect **primary** data?
- How will you select who takes part?

Research methods:

This *may* include:

- Research philosophy and approach (positivism or phenomenology? Induction or deduction?)
- Research strategy (action research, experiment, case study, survey, etc.)
- The study population and sample (who are they, do you have access?)
- Data collection methods for each objective (interview, questionnaire, observation, document review, etc.).
- Reliability and validity

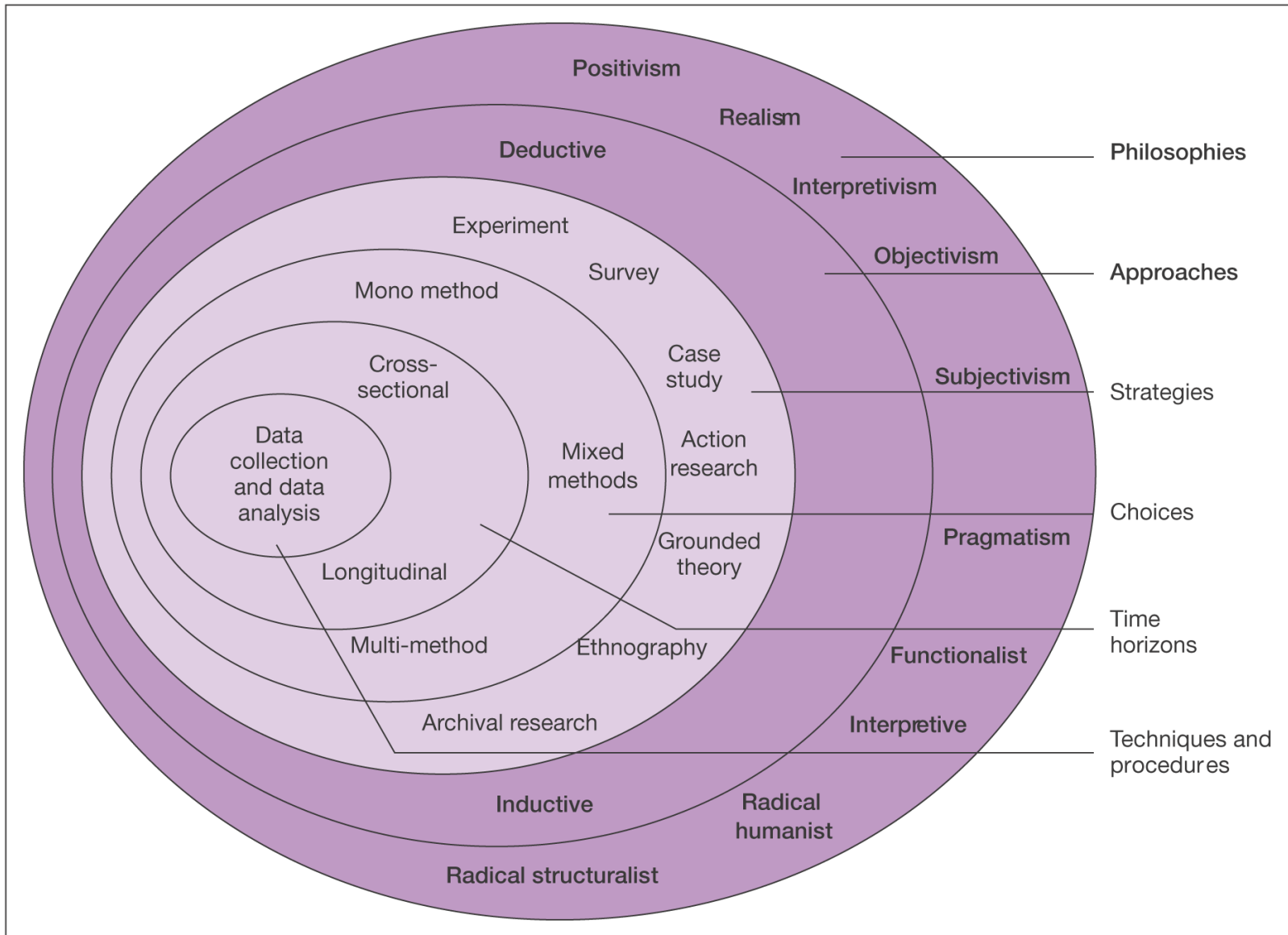


Figure 1 The research 'onion'

Source: © Mark Saunders, Philip Lewis and Adrian Thornhill 2007

Two main research philosophies (or paradigms, epistemology)

Epistemology, your research philosophy, asks the question '*how do we know what we know?*'

1. **Positivism** contends there are single true answers to questions, which can be found by carefully applying scientific procedures, such as experiments (to *test* theory and *measure* results).
2. **Phenomenology** '*is concerned with understanding human behaviour and...focuses on the meaning, rather than measurement of social phenomena.*' (Collis and Hussey, 2003, p. 53). Reality is socially constructed, based on participants' perceptions, and needs to be 'understood' rather than trying to generate 'facts' (Saunders et al, 2012). To *build* knowledge from event(s) and/or object(s), based upon the world as participants see it.

Features of the main research paradigms

(Collis and Hussey, 2003, p.55)

Positivistic	Phenomenological
Tends to produce quantitative data	Tends to produce qualitative data
Uses large samples	Uses small samples
Concerned with testing theory (deductive approach)	Generates/builds theory (inductive approach)
Data is highly specific & precise	Data is rich and subjective
The location is artificial	The location is natural
Reliability is high	Reliability is low
Validity is low	Validity is high
Generalises from sample to population	Generalises from one setting to another

**Your preferred
research
paradigm is....?**

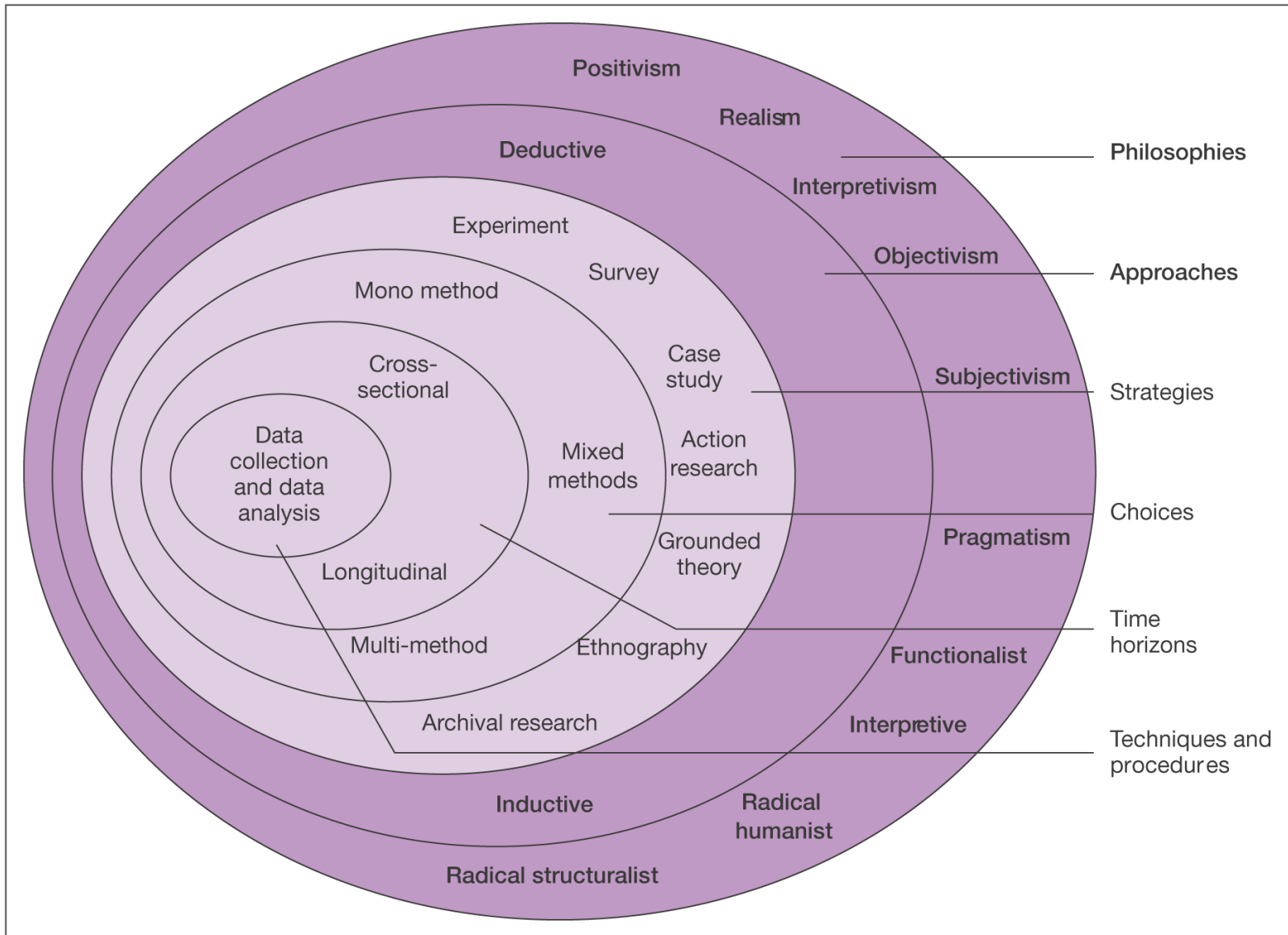


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Who, or what, to choose?

When undertaking any form of research it is necessary to choose:

‘**the sample**, who are to provide you with the data from which you will draw conclusions about some larger group, the population, who these people represent’

(Ref: Jankowicz,1995:155)

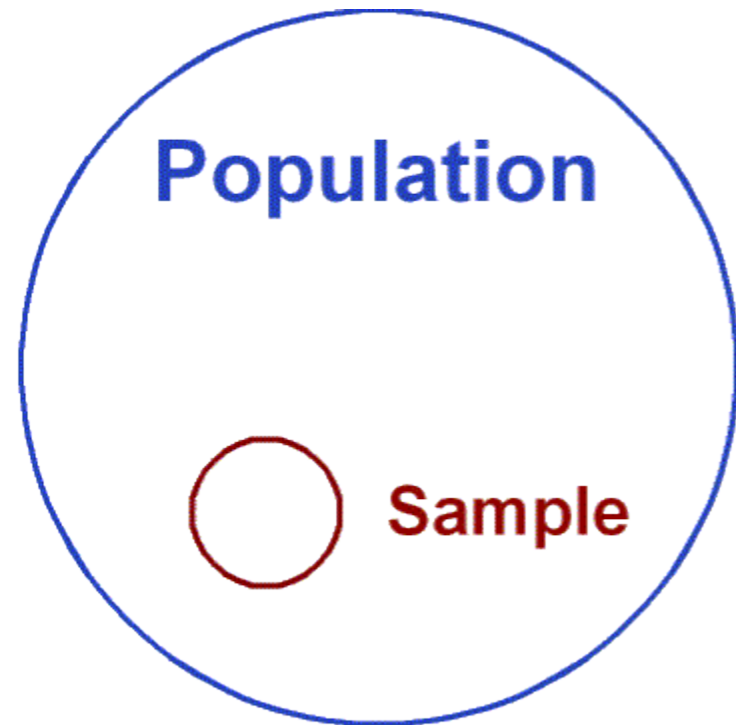
Decisions to be taken:

- i. Who is to be surveyed?
- ii. Sample size?
- iii. Sampling procedure?

Who, or what, to choose?

Constructing your sample

<https://youtu.be/Gs-gLeYuDZw>



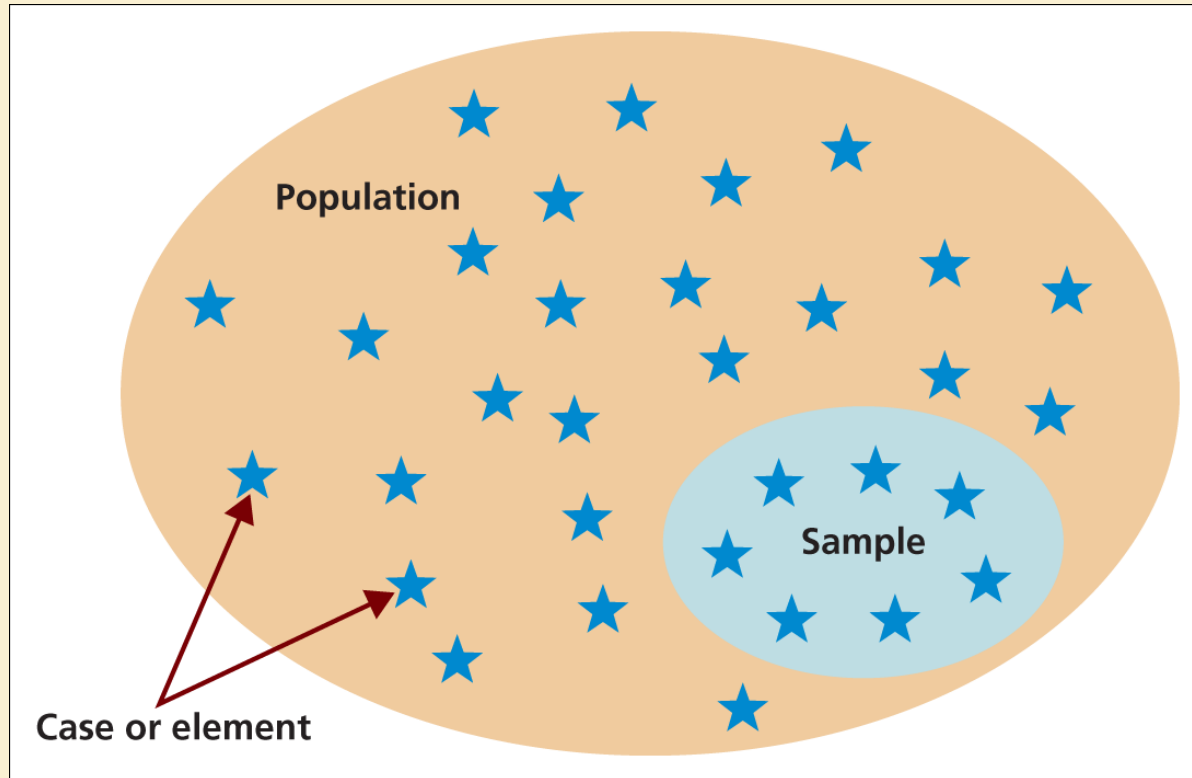


Figure 7.1 Population, sample and individual cases

‘Sampling is a major problem for any kind of research. We can’t study every case whatever we’re interested in.....

..... Every scientific enterprise tries to find out something that will apply to everything of a certain kind by studying a few examples, the results of the study being, as we say, ‘generalisable’ to all members of that class of stuff.

We need the sample to persuade people that we know something about the whole class.’

Ref: Becker (1998:67) cited in Long J (2007: 35) SAGE, London

The selection process

- Generally impossible or impractical to include everyone or everything of interest - why?
- Sample may be of people, sites/places, events/activities and/or particular time, day, season
- Needs to ensure that the sample is 'fit for purpose' i.e. will allow the researcher to gather relevant data to answer the research question
- Should be carefully thought through to ensure that 'you can maximise the inclusiveness of the study'

(Long J, 2007: 36)

Key concepts:

1. **Population** - ‘all the people, facilities etc that fit the description you establish’ - important that this is clearly and precisely defined
2. **Sampling frame** - listing of examples of population from which sample will be chosen
3. **Sample** - ‘a selection of elements from that sample’ – must be representative of the population

(* Ref: Long J, 2007: 36)

‘A *population* relates to the entire set of data that is of interest to us. A *sample* is a (representative) part of that population.’

(Ref: Wisniewski,2006:105)

How many?

Depends on:

- nature of the research
- population size
- ‘nature of the variation in the group’ i.e. sub-group
e.g. age, ethnicity, socio-economic groups
- level of accuracy
- nature of analysis

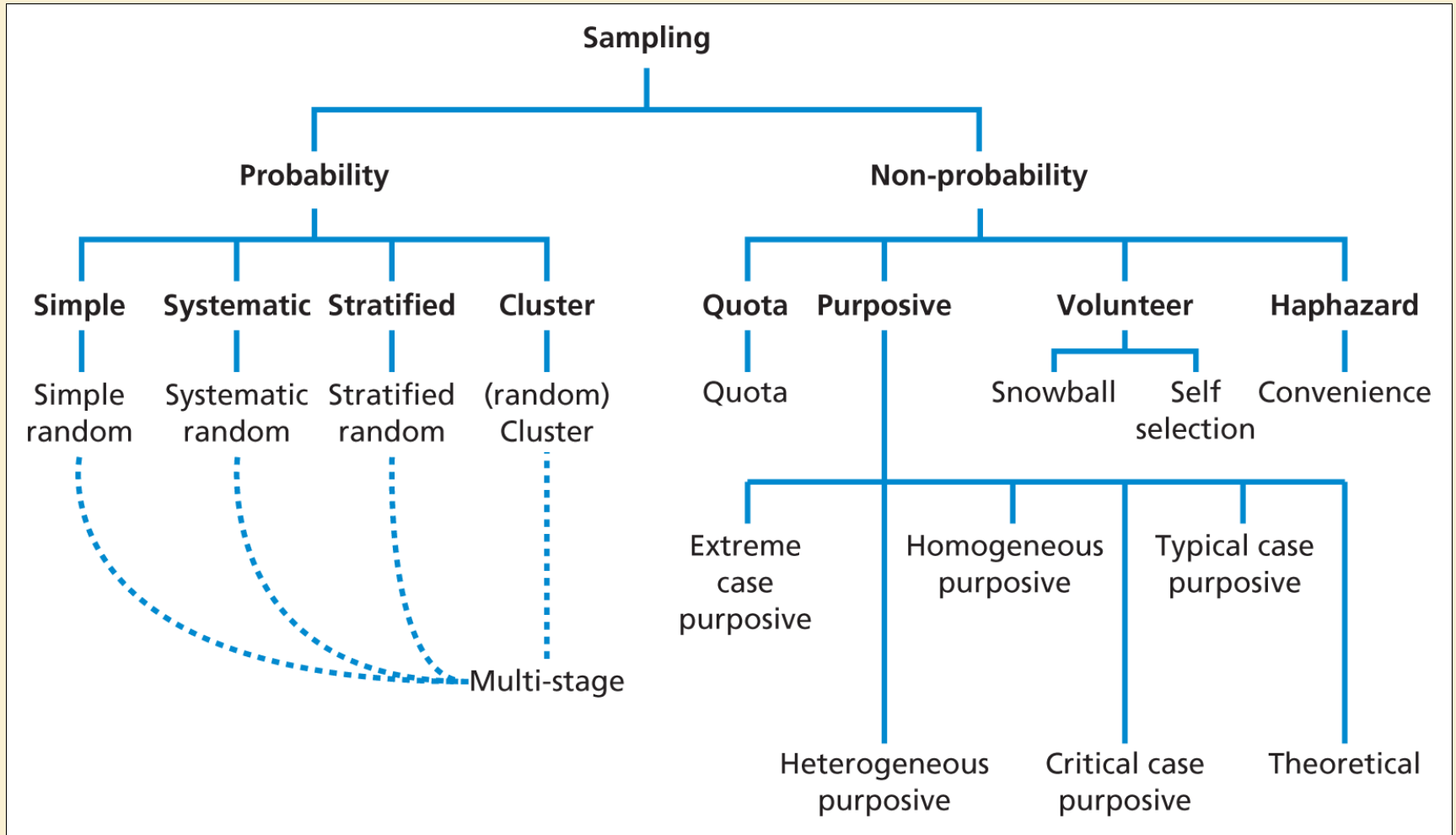


Figure 7.2 Sampling techniques

Sampling methods

A. Probability or random sampling – 4 main types:

- i. **Simple Random Sample** – ‘random selection from a known, complete sampling frame so that every person/unit in the population has an equal chance of being included’
- ii. **Systematic Sampling** e.g. every 10th person
- iii. **Stratified Sampling** - population divided into sub-groups and sub-samples e.g. by age, sex, department etc
- iv. **Multistage Cluster Sampling** e.g. large area chosen (Swansea), then district (Mumbles), random sample of households in Mumbles, specific individuals in households

Probability (random) sampling:

- every member of the population has an equal chance of being selected for the sample
- random sample (technically) has the best chance of being representative of the population

But:

- Often difficult to design and collect all data elements identified, introducing bias in the resulting sample (no longer random)
- cluster sampling the most common form of probability sampling but weakness is failure to take account of population characteristics

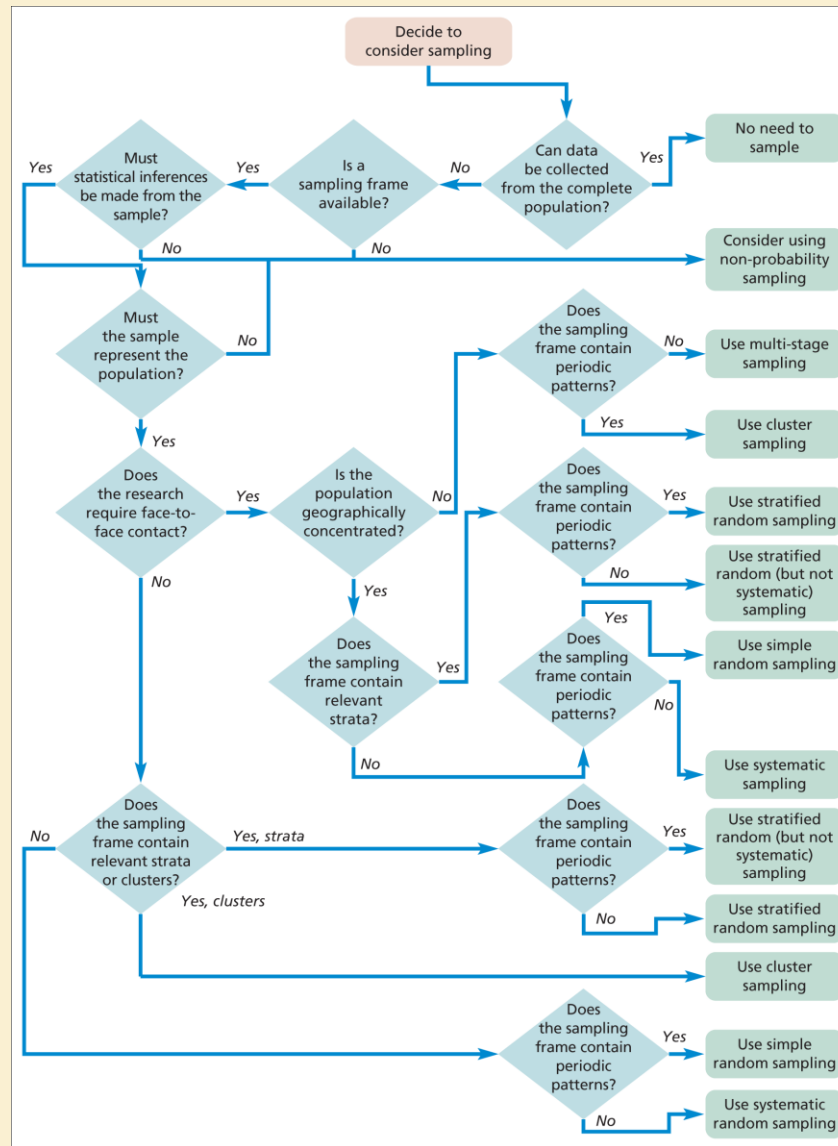


Figure 7.3 Selecting a probability sample

Note: Simple random sampling ideally requires a sample size of over a few hundred.

B. Non-probability sampling – 3 main types:

- i. Quota Sampling** – identify proportions of a population in different categories e.g. age, sex etc and interview required quotas from each category
- ii. Purposive Sampling** – targeting key individuals with specific knowledge/understanding
- iii. Convenience Sampling** – accidental i.e. targeting whoever is on hand

Non-probability (or judgemental) sampling:

- doesn't require the whole population to be defined and listed (sampling frame)
- helps overcome some of the practical problems i.e. lack of time and funds, easier access and difficulty of capturing every randomly selected element
- 'allows greater scope for inference and judgement in interpreting results'

(Ref: Jankowicz,1995:158)

But:

➤ results may be biased

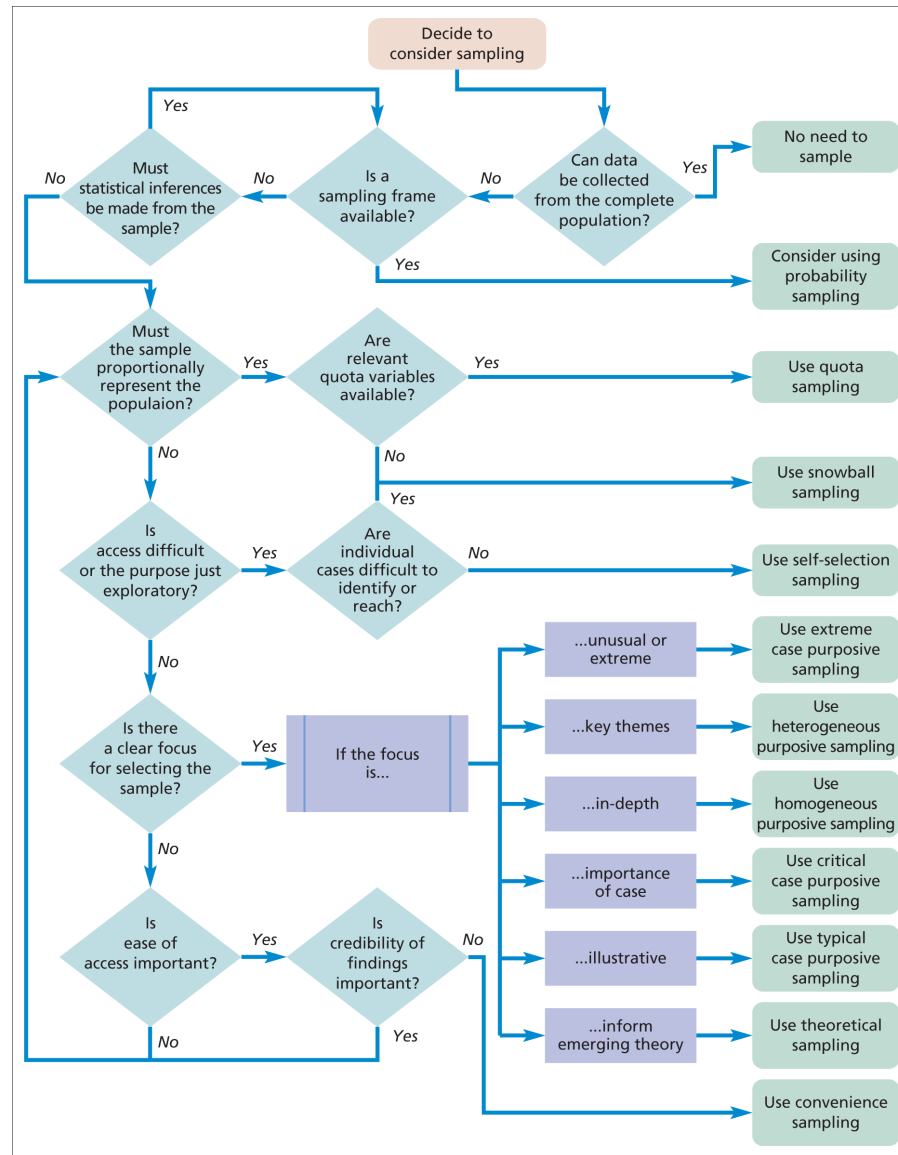


Figure 7.5 Selecting a non-probability sampling technique

Which approach should be adopted?

It depends upon the research question and what you wish to find out.

Let's consider the following:

UWTSD wants to investigate student usage of the café:

1. What measures could be used to test this which would provide quantitative data?
2. What strategies could be adopted which would generate qualitative data?
3. What techniques might you use which would enable you to generate quantitative and qualitative data?

Examples:

Quantitative:

- Do you eat here often – yes/no
- How often – 1, 2, 3, 4, 5, 6, 7 days per week?

You could, of course, simply do a head count at set times during a given period and/or use till receipts to analyse usage

Qualitative:

- Do you eat here regularly – yes/ no. If no why not?
- Are you satisfied with the range of food on offer? If no please explain

Quantitative/Qualitative:

- Do you use this food outlet?

Not at all
Occasionally
Frequently
Daily

☐
☐
☐
☐

So let's test your understanding!

Scenario: You are employed either as:

- a retail travel agent specialising in the educational market
- an assistant manager at a leisure centre
- a general assistant at a local heritage attraction
- a trainee manager at Center Parks Longleat
- an events organiser for the National Trust

Certain parts of each of these businesses have not performed well over the last two years and the managers want to know why

In small groups: Choose one situation from the four identified above
Decide on an appropriate research question and when you have done this formulate:

- 2 quantitative questions
- 2 qualitative questions
- 2 qualitative/quantitative questions

The 2 questions in each group must address the same topic

So.....for the PID please consider:



- How you will **identify** and ***justify*** the research methods that you will use to gather your data and/or evaluate your results.
- What decisions need to be undertaken to progress your research project?
- What research methods are you adopting?
- What sampling method are you going to adopt?
- How are you going to ‘catch’ your target group?

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[Recap]

Next:

Primary Data Collection:

- Using questionnaires**
- Interviews**
- Other methods**

