Sampling

Sampling

- Objective
- Size does matter
- Sufficient for purpose
- To produce as accurately as possible a population on a smaller [useable/fit for purpose] scale

Targeting participants

Whatever method of data gathering is used a **systematic consideration** has to be made about who to interview, or send questionnaires to, what to observe, which documents to analyse, etc.

Targeting – 3 Ws

- **When** data is collected – before, during, immediately after, sometime after or combination of these?
- **Where** data collection is done – what is best for participants to limit social desirability effects yet is practicable?
- **What** should information be gathered about – events, processes, self-reported behaviour / attitudes / beliefs, etc.

Targeting

This means thinking about from whom/what information is gathered:

- Are your participants' views typical of a group?
- Do they have specific kinds of information or perspectives which it are important to gather e.g. because they were happy or dissatisfied with a project?

SAMPLING

- Of people
- Of events
- Of institutions
- Of extant data
- Of time
- Of artefacts

Population [or sample frame]

- Used to refer to any social group or complete data set

  e.g. from a whole society to employees of an organisation or the 2nd year students in ESF.

Sample Size

Main parameters are:

- complexity of population
- research methods used
- time and cost factors

Sample Size

Attention has to be paid to resultant cell size (i.e. the subgroup of the population you end up with once you have applied sampling technique) for reality and statistical purposes.

For example, in a typical education situation 100 pupils divided by gender and, for e.g. two levels of attainment gives cell size 25, any further variables reduces cell size by 50% etc.

Reality: is sample big enough so that findings are generalisable in common sense terms – 80% = a majority but may only mean 4 people is the sample size is only 5! 4 people's views do not make a sound basis for generalising to the parent population.

Statistically: sample has to be big enough to make statistical testing a reasonable thing to do.

Non-respondents

Can be catered for by:

- Over-sizing the initial sample
- by additions or replacements

Systematic Random Sampling

- Time saving
- take every nth number starting at random number, e.g. for 10 per cent sample 5/12/25 etc.
- Must make sure there are is no pre-existing structure to the list that biases the sample…….for hypothetical example, if a list of married heterosexual couples went husband-wife etc and you chose every 10th person, every person in the sample would be female!

Random Sampling

- It must be established that the population/sample frame has no order/arrangement that will bias the research

- the frame may have an order that predisposes the sampling of a particular type. The phone book is in alphabetical order – but only lists those that have a phone and are not ex-directory etc. Would this bias the research?

Stratified Sampling

- Population/sample frame is first divided into **strata** from which a sample is drawn
- **Stratification** is the process of grouping members of the population into relatively homogeneous subgroups before sampling. The strata should be mutually exclusive : every element in the population must be assigned to only one stratum. The strata should also be collectively exhaustive : no population element can be excluded. Then random or systematic sampling is applied within each stratum. This often improves the representativeness .

Multi-Stage Sampling

- Samples within samples or by stage, e.g. Schools in Britain, first sample LEAs, next schools, next classes, next pupils in classes.
- High level of sophistication can be achieved, e.g. in above first stage could include size/rural, urban location/per pupil expenditure, etc. Data can vary by stage

Quota sampling

- Non-random stratified sampling that is common in market research. A researcher collects data from a quota of individuals defined by gender/ethnicity/employment status etc.

- Dependent on accuracy of design and execution.

Opportunity sampling

- ‘Captives’, like a class of students, club members, patients in a ward/clinic, customers in a shop etc.

Volunteer sampling

- By invitation, e.g. readers of a publication, victims of bullying/crime, users of a given commodity e.g. doctor's surgery etc.
- Useful where population is disperse.
- Limitation is that the difference between volunteers and non volunteers might be crucial to the research.

Response rates

- Soundness of evaluation/research depends on response rate.
- Refusals and incomplete responses.
- Response rate can depend on interest of topic/instrument design/time to complete.

Best and worst results

- **Best is usually** face to face, on the spot

  [90+% response]

- **Worst is usually** postal / email / web questionnaires

  [40% considered very good]