

Selecting Methods of Data Collection



Topics covered

- Differences in methods of collecting data
- Major sources of information gathering
- Collecting data using primary sources
 - Observation
 - The interview
 - The questionnaire
 - Advantages and disadvantages
 - Types of questions
 - Formulating effective questions
- Constructing a research instrument in quantitative research
- Methods of data collection in qualitative research
- Collecting data using secondary sources



Differences in methods of collecting data in quantitative, qualitative and mixed methods research

Quantitative, qualitative or mixed methods classification depends on the answers to the following questions:

- What philosophical approach is underpinning the research approach?
- How was the information collected? Was the format structured or unstructured/flexible or a combination of the both?
- Were the questions or issues discussed during data collection predetermined or developed during data collection?



Differences in methods of collecting data in quantitative, qualitative and mixed methods research continued

- How was the information gathered recorded? Was it in a descriptive, narrative, categorical, quantitative form or on a scale?
- How was the information analysed? Was it a descriptive, categorical or numerical analysis?
- How will the findings be communicated? In a descriptive or analytical manner?
- How many different methods were used in undertaking the study?



Insert Figure 9.1 Methods of data collection

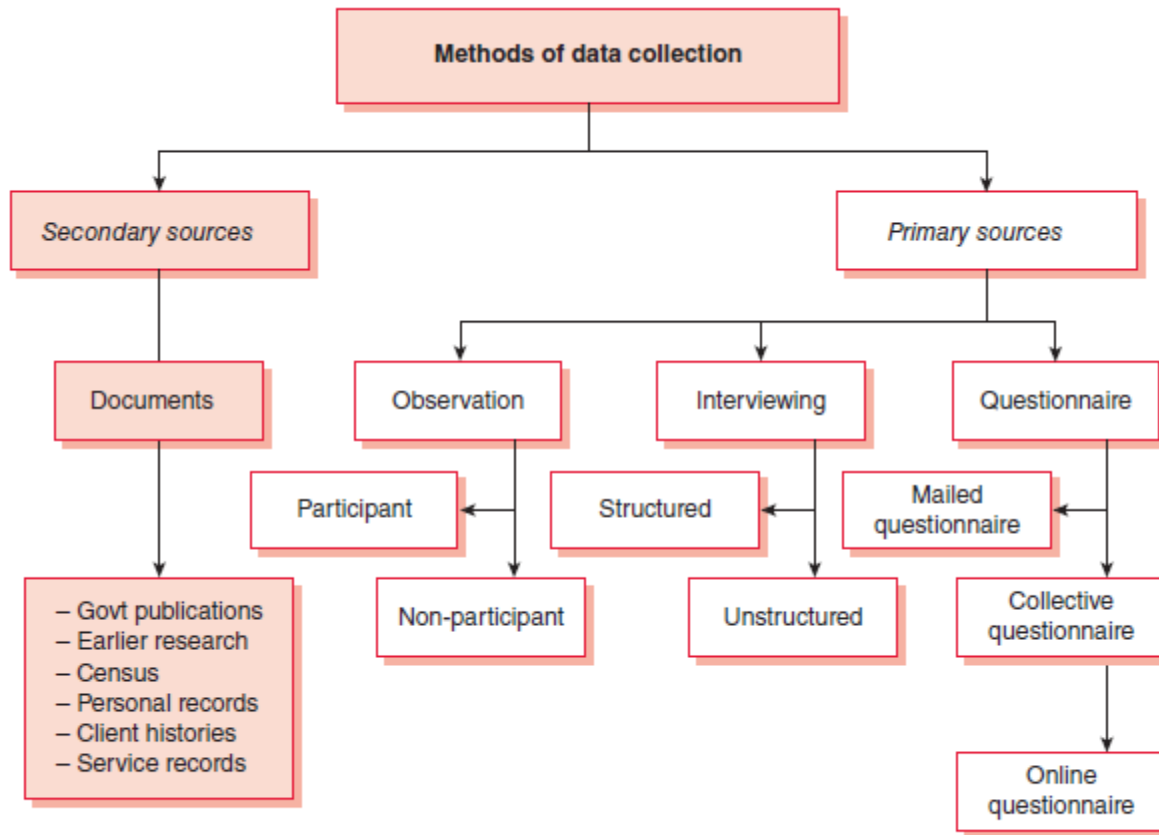


Figure 9.1 Methods of data collection



Major sources of information gathering

- **Primary data:** The researcher undertakes the data collection
- **Secondary data:** The data is already available and can be reanalysed



Observation

Watching and listening to interactions

- Participant observation
- Non-participant observation
- Natural
- Controlled
- Recording of observations:
 - Narrative recording
 - Categorical recording
 - Recording on electronic devices
- Effects that could affect observations:
 - Hawthorne effect: Participants are aware of the observation and change their behaviour
 - Elevation effect: Researcher over-uses a particular scale for recording
 - Halo effect: Researcher bias towards a particular participant



The interview

Questioning people

- Unstructured interviews: Freedom in structure, content, wording and order of questions
- Structured interviews: Interview schedule predetermines the questions, wording and order



The questionnaire

Written list of questions completed by the respondent

- Mail or postal questionnaire (covering letter)
- Collective administration
- Online questionnaire
- Administration in a public place



Choose between interview schedule and questionnaire

Consider the following:

- The nature of the investigation
- The geographical distribution of the study population
- The type of study population



Strengths and weaknesses of questionnaires

Strengths

- Convenience:
 - Saves time
- Inexpensive:
 - Saves human and financial resources
- Offer greater anonymity
 - No face-to-face action
 - Likelihood to obtain more accurate information on sensitive questions

Weaknesses

- Limited application
- Low response rate
- Self-selecting bias
- Lack of opportunity to clarify issues
- No opportunity for spontaneous responses
- Responses may be influenced by the response to other questions
- Others can influence the answers
- Responses cannot be supplemented with other information



Advantages and disadvantages of interviews

Advantages

- More appropriate for complex situations
- Useful for collecting in-depth information
- Information can be supplemented
- Questions can be explained
- Has a wider application

Disadvantages

- Time consuming and expensive
- Quality of data depends on
 - Quality of interaction
 - Quality of interviewer
 - Could vary when multiple researchers are involved
- Possibility of researcher bias



Types of questions

Open-ended questions

- Advantages:
 - Provide in-depth information
 - Greater variety of information
 - No investigator bias
- Disadvantages
 - Analysis is more difficult if answers need to be classified
 - Loss of information if respondents cannot express themselves
 - Possible interviewer bias

Closed questions

- Advantages:
 - Easy to answer
 - Easy to analyse due to ready-made categories
- Disadvantages:
 - Information lacks depths and variety
 - Greater possibility of investigator bias
 - Answers are selected from a list and may not reflect respondents opinion



Formulating effective questions

- Use easy and every day language
- Avoid ambiguous questions
- Avoid double-barrelled questions
- Avoid leading questions
- Avoid questions based on assumptions



Constructing a research instrument in quantitative research

- Personal and sensitive questions
- The order of the questions
- Pre-testing a research instrument
- Pre-requisites for data collection:
 - Motivation to share required information
 - Clear understanding of the questions
 - Possession of the required information



Methods of data collection in qualitative research

- Unstructured interviews
- In-depth interviews
- Focus group interviews
- Narratives
- Oral histories
- Observation



Collecting data using secondary sources

- Government or corporate websites
- Earlier research
- Personal records
- Mass media

Possible problems of secondary data:

- Validity and reliability
- Personal bias
- Availability
- Format

