

# Kumar: Research Methodology

## Chapter 9

# Selecting Methods of Data Collection

Prepared by Stephanie  
Fleischer



# 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

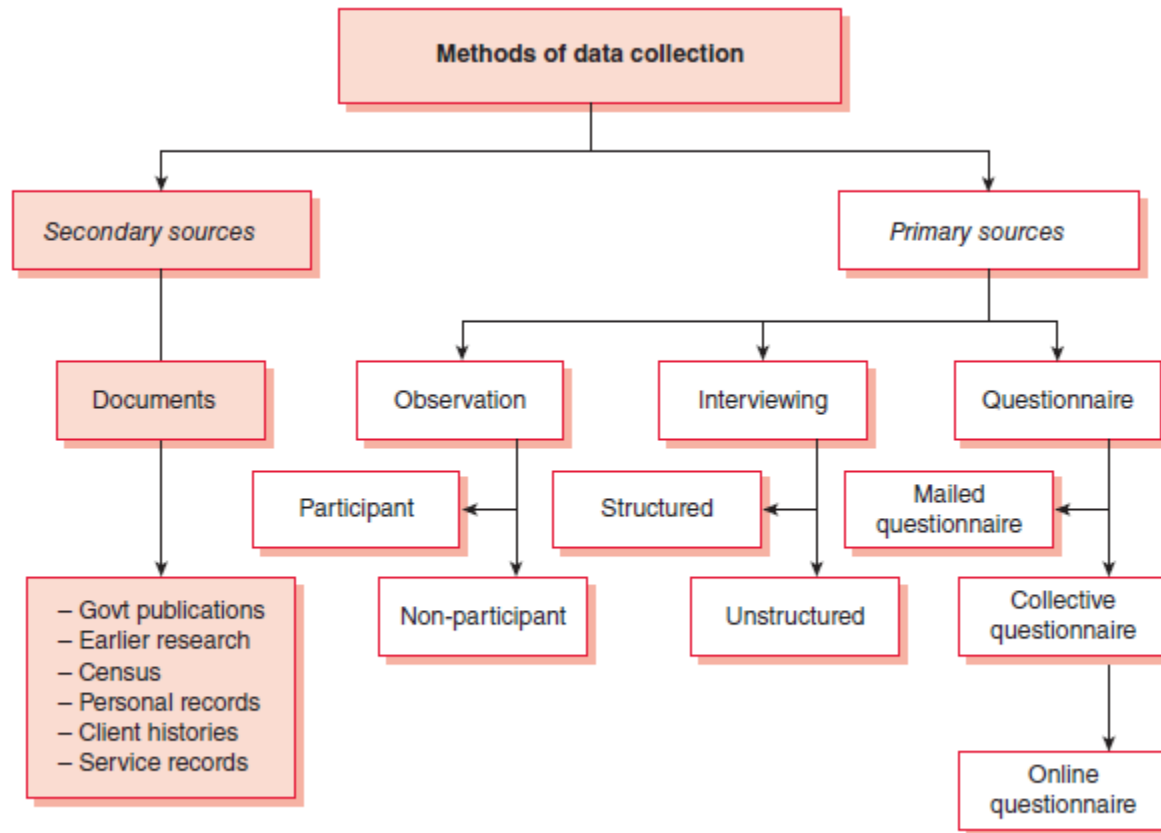


Figure 9.1 Methods of data collection



# Major sources of information gathering

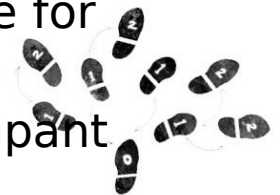
- **Primary data:** The researcher undertakes the data collection
- **Secondary data:** The data is already available and can be reanalysed



# 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**

