

# Kumar: Research Methodology

## Chapter 2

# The Research Process: A Quick Glance

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# Topics covered

The eight step model for carrying out research:

Phase I: DECIDING what to research

Step I: Formulating a research problem

Phase II: PLANNING a research study

Step II: Conceptualising a research design

Step III: Constructing an instrument for data collection

Step IV: Selecting a sample

Step V: Writing a research proposal

Phase III: CUNDUCTING a research study

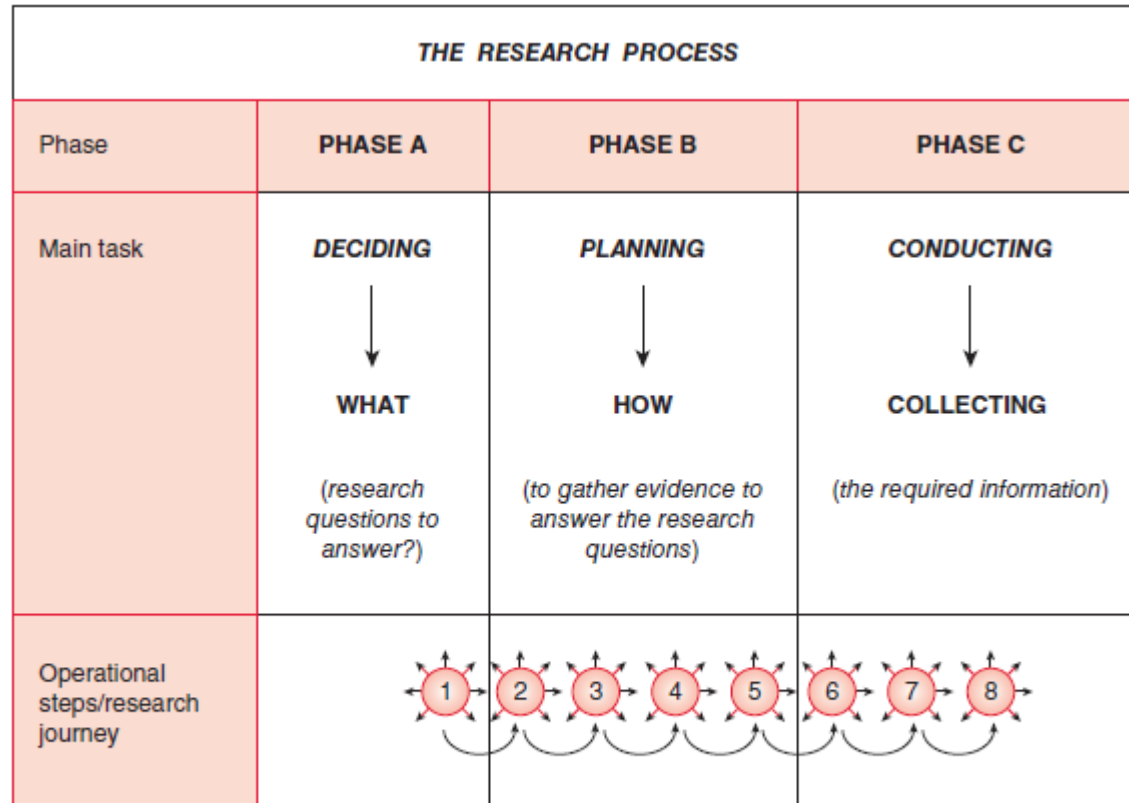
Step VI: Collecting data

Step VII: Processing and displaying data

Step VIII: Writing a research report



# Figure 2.1 The research journey



**Figure 2.1** The research journey – touch each post and select methods and procedures appropriate for your journey



# The research process

- Methodologies differ due to underpinning philosophy
- The process is the same for quantitative and qualitative research
- Each approach uses different research methods for data collection, data processing, analysis and style of communicating the findings



# Table 1.1 Differences between qualitative and quantitative research

**Table 1.1** Types of research studies from the perspective of objectives

Examples	Aim	Main theme	Type of research
<ul style="list-style-type: none"> <li>• Socioeconomic characteristics of residents of a community</li> <li>• Attitudes of students towards quality of teaching</li> <li>• Types of service provided by an agency</li> <li>• Needs of a community</li> <li>• Sale of a product</li> <li>• Attitudes of nurses towards death and dying</li> <li>• Attitudes of workers towards management</li> <li>• Number of people living in a community</li> <li>• Problems faced by new immigrants</li> <li>• Extent of occupational mobility among immigrants</li> <li>• Consumers' likes and dislikes with regard to a product</li> <li>• Effects of living in a house with domestic violence</li> <li>• Strategies put in place by a company to increase productivity of workers</li> </ul>	<p>To describe what is prevalent regarding:</p> <ul style="list-style-type: none"> <li>• a group of people</li> <li>• a community</li> <li>• a phenomenon</li> <li>• a situation</li> <li>• a programme</li> <li>• an outcome</li> </ul>	To describe what is prevalent	<b>Descriptive research</b>
<ul style="list-style-type: none"> <li>• Impact of a programme</li> <li>• Relationship between stressful living and incidence of heart attacks</li> <li>• Impact of technology on employment</li> <li>• Impact of maternal and child health services on infant mortality</li> <li>• Effectiveness of a marriage counselling service on extent of marital problems</li> <li>• Impact of an advertising campaign on sale of a product</li> <li>• Impact of incentives on productivity of workers</li> <li>• Effectiveness of an immunisation programme in controlling infectious disease</li> </ul>	<p>To establish or explore:</p> <ul style="list-style-type: none"> <li>• a relationship</li> <li>• an association</li> <li>• an interdependence</li> </ul>	To ascertain if there is a relationship	<b>Correlational research</b>
<ul style="list-style-type: none"> <li>• Why does stressful living result in heart attacks?</li> <li>• How does technology create unemployment/employment?</li> <li>• How do maternal and child health services affect infant mortality?</li> <li>• Why do some people have a positive attitude towards an issue while others do not?</li> <li>• Why does a particular intervention work for some people and not for others?</li> <li>• Why do some people use a product while others do not?</li> <li>• Why do some people migrate to another country while others do not?</li> <li>• Why do some people adopt a programme while others do not?</li> </ul>	<p>To explain:</p> <ul style="list-style-type: none"> <li>• why a relationship, association or interdependence exists</li> <li>• why a particular event occurs</li> </ul>	To explain why the relationship is formed	<b>Explanatory research</b>



# Figure 2.2 The research journey

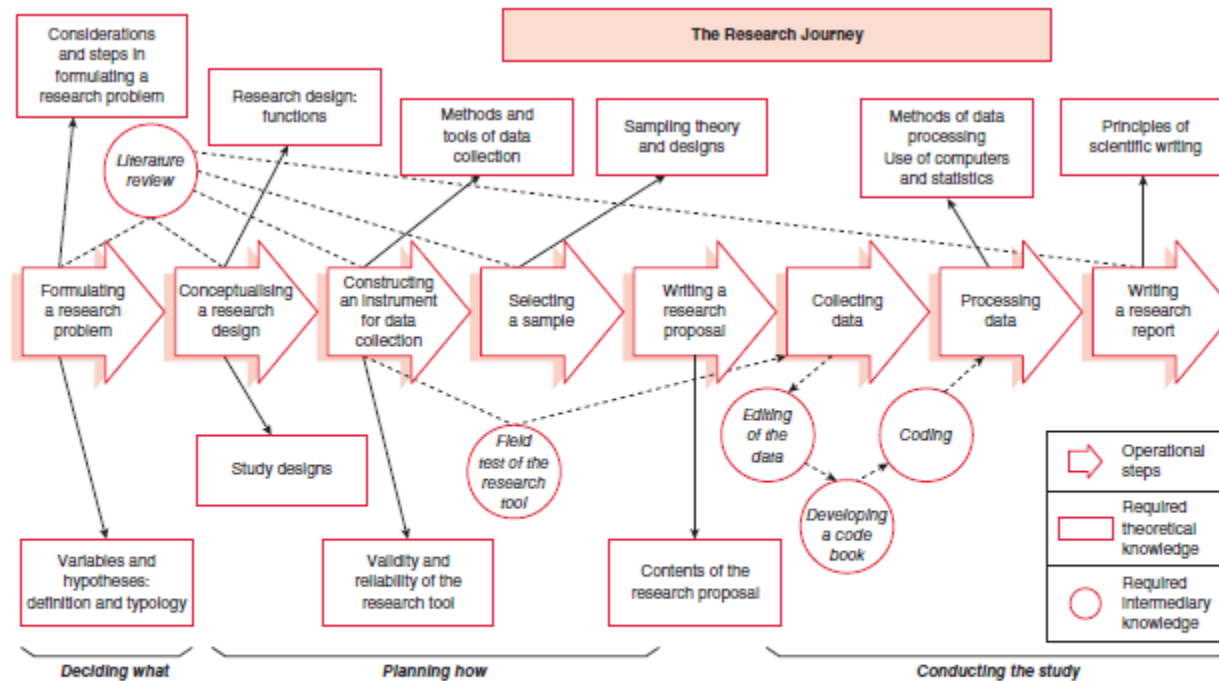


Figure 2.2 The research process



# Phase I: DECIDING what to do

## Step I: Formulating a research problem

- Most important step, because the following steps are influenced by the research problem
- *What* do you want to find out *about*?
  - Have you got sufficient funds to do the research?
  - Have you got the time available to conduct the study?
  - Have you got knowledge of relevant disciplines?
  - Do you have sufficient knowledge of skills needed?



# Phase II: PLANNING a research study

## Step II: Conceptualising a research design

*What you find depends on how it was found*

- Select an appropriate research design:
  - Quantitative
  - Qualitative
  - Mixed methods
- The design has to be
  - Valid
  - Workable
  - Manageable
- Be aware of its strengths and weaknesses





# Phase II: PLANNING - continued

## **Step III: Constructing an instrument for data collection**

*How will you collect your data?*

- Construct a research instrument or research tool to collect data (interview schedules, questionnaires, notes on observations, diaries, interview guides, etc.)
- Or use secondary data (information already collected for other purposes)
- Do a pre-testing of your research tool (pilot study)



# Phase II: PLANNING – continued

## **Step IV: Selecting a sample**

*Who* will take part in your research?

- Select appropriate sample/participants to represent the study population
- Avoid bias
- Random / probability samples
- Non-random / non probability samples
- Be aware of strengths and weaknesses of different sampling methods



# Phase II: PLANNING - continued

## Step V: Writing a research proposal

Write a detailed plan about your research:

- *What* are you proposing to do?
- *How* you plan to proceed?
- *Why* you select the proposed strategy?



# Phase III: CONDUCTING a research study

## Step VI: Collecting data

Doing the data gathering using one or more data collection method, such as:

- conducting interviews
- mailing out questionnaires
- conducting nominal/focus groups discussions
- making an observation

Be aware of ethical issues!



# Phase III: CONDUCTING - continued

## Step VII: Processing and displaying data

*What did you find how?*

- Analysing the data depends on the *type* of information and *how* to communicate the findings
- Distinguish between
  - Descriptive
  - Quantitative (statistical procedures)
  - Qualitative (narrative, content analysis)
  - Attitudinal



# Phase III: CONDUCTING - continued

## Step VIII: Writing a research report

*What* have you done? *What conclusions* have you drawn from the findings?

- Different format for quantitative and qualitative research
- Structure using main themes of study
- Use academic conventions

