

## THE RESEARCH PROCESS

### Use this sheet to help you:

- Understand the seven stages of the research process
- Develop a systematic approach to research

### 5 minute self test

Number the stages below (1 = first; 7 = last) to indicate a typical sequence the research process might take. The first has been done for you.

	Initial data gathering
	Further data gathering
	Deduction
1	Observation
	Theory formulation
	Hypothesis formulation
	Data analysis

Check your answer on Page 2

## Introduction: the research process

Have you ever considered the idea of a sequential research process?

Many people haven't, and at university, student familiarity with research processes can sometimes be taken for granted.

This Helpsheet provides an outline of a standard research process linked to an example that may serve as a useful guide for your research.

Please note that not every research task will need to follow the exact sequence listed below. You may have a preference for a particular combination of approaches. Furthermore, your research process is likely to be affected by the nature of the project you are working on: case study, pure or applied research, qualitative and quantitative research, and so on. However, whatever your research project, it should have at least some of the seven stages listed below.

## A seven stage process

1. Observation
2. Initial data gathering
3. Theory formulation
4. Hypothesis formulation
5. Further data gathering
6. Data analysis
7. Deduction

### One example

A manager observes that customers are not as happy as they used to be. He talks to the customers and identifies that the shop is frequently out of stock and customers see the salespeople as unhelpful. Further discussion uncovers that the delivery dates are not kept though the salespeople informs the customers of the later delivery dates.

The manager then conducts a literature review (see the **Study and Research Helpsheet: Literature Reviews**). He does this because he is busy and doesn't want to re-invent the wheel. If someone has noticed this problem before, he wants to benefit from the results of their work. He goes to the local Business and Economics Faculty Library to learn what others have done.

He notes that there is plenty of information available on this problem. Previous researchers have noticed the problem, come up with hypotheses about the issue and analysed data to determine the validity of their hypothesis. From this, they have proposed solutions and recommendations to fix the problem.

However, the manager notices that not all the articles on the issue are directly relevant. No-one has published anything on his particular industry before in which there are specific things that need to be considered. He decides to read the literature about the issue closely and make his own hypothesis. The manager has done something important. He has noted a **gap** in the research. From this point, he decides to begin further investigations...

## A seven stage process with examples

### 1. Observation

- Noticing that "things are not as they should be" in a management situation (eg. noticing that customers are unhappy)
- Another example: noticing a problem in the application of management theory

### 2. Initial data gathering

- Talking to people in the work setting (eg. customers and salespeople)
- Conducting a literature review of work done on the problem in the past and currently
- Identifying how the problem is tackled in similar situations
- Noting a "gap" in the research
- Beginning the process of formal interviews and data collection.

### 3. Theory formulation

- Making associations/identifying the variables which help explain the situation (eg. anticipated and actual delivery times, importance of items in stock for customers, other commitments of service providers, "Just in Time" management practices)
- Attempting to justify why these variables are relevant.

### 4. Hypothesising (may be explicit or tacit)

- Drawing associations between variables (stock, supply and customer unhappiness)
- Making conjectures about how they may be manipulated (new providers, different delivery arrangements)
- Using conjectures to arrive at an understanding of the situation (if arrangements are made to stock items twice weekly, there will be an increase in customer satisfaction).

### 5. Further data gathering

- Making measurements and analysing the circumstances hypothesised in carefully monitored situations (measuring customer satisfaction under situation 1, 2, etc)
- Collecting this data carefully.

## 6. Data analysis

- Statistical and/or qualitative analysis of results—testing and analysing the significance (e.g., correlation analysis of relationship between stock and customer dissatisfaction).

## 7. Deduction

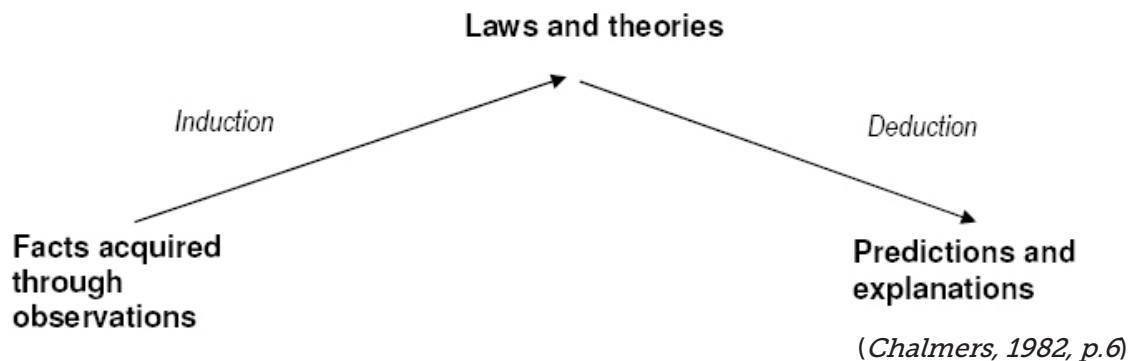
- Interpreting conclusions of data analysis (increasing stock is positively correlated to increased levels of customer satisfaction)
- Making recommendations derived from conclusions

## Inductive and Deductive Research

**Inductive** research is the first stage in this process (steps 1-3): from observation to theoretical understanding.

**Deductive** research is the second stage in this process (steps 4-7): Deductive research involves arriving at a conclusion about data from one's theoretically informed perspective or understanding.

The entire process is called the **hypothetico-deductive method**.



For more information, see **Study and Research Helpsheet: What is Research?**

## References

Sekaran, U. (1992). *Research Methods for Business: A Skills Building Approach*. New York: Wiley.

Chalmers, A., (1982). *What is thing called Science?* St Lucia: University of Queensland Press.