

# Analytical, critical and consultancy skills

## Key concepts and terms

- *Analysis*
- *Critical evaluation*
- *Critical thinking*
- *Evidence-based management*
- *Fallacy*
- *Logical reasoning*

## LEARNING OUTCOMES

On completing this chapter you should be able to define these key concepts. You should also understand:

- The meaning of evidence-based management
- The use of analytical skills
- The nature of logical reasoning
- The nature of critical thinking
- The nature of critical evaluation
- The skills required by external and internal consultants

## Introduction

The processes of problem solving and decision making depend largely on effective analysis, critical thinking and evaluation and the use of consultancy skills as covered in this chapter. The basis of all these is provided by evidence-based management as discussed below.

## Evidence-based management

Evidence-based management is a method of informing decision making by making use of appropriate information derived from the analysis of policy and practices and surveys of employee opinion within the organization, systematic benchmarking and the messages delivered by relevant research.

The following comments on evidence-based management were made by Pfeffer and Sutton (2006: 70):

Nurture an evidence-based approach immediately by doing a few simple things that reflect the proper mind-set. If you ask for evidence of efficacy every time a change is proposed, people will sit up and take notice. If you take the time to pursue the logic behind that evidence, people will become more disciplined in their own thinking. If you treat the organization like an unfinished prototype and encourage trial programs, pilot studies, and experimentation – and reward learning from these activities, even when something new fails – your organization will begin to develop its own evidence base.

A five-step approach was recommended by Briner et al (2009: 23):

- 1 Practitioners or managers gain understanding of the problem or issue.
- 2 Internal evidence is gathered about the issue or problem, leading, possibly, to a reformulation of the problem to make it more specific.
- 3 External evidence is gathered from published research.
- 4 The views of stakeholders are obtained.
- 5 All the sources of information are examined and critically appraised.

It should be emphasized that what is done in organizations with the evidence depends largely on the context in which it is done. Cultural, social and political factors influence perceptions and judgements and the extent to which people behave rationally is limited by their capacity to understand the complexities of the situation they are in and by their emotional reactions to it – the concept of bounded rationality as expressed by Simon (1957).

But we need to understand the context – its impact on what is happening and how things are done. We need then to understand what actions can be taken to address the issues emerging from the situation. We need evidence which tells us what is going on within the organization, what has worked well elsewhere which might fit our requirements and what research

has revealed about policies and practices which will guide us in making our decisions. And we need to use that evidence as the basis for our choice of the actions we intend to take. In other words, we need to practice evidence-based management using the analytical, critical thinking and consultancy skills described in the rest of this chapter.

## Analytical skills

Analysis is the process of breaking down a condition or state of affairs into its constituent parts and establishing the relationships between them. In the Aristotelian sense, analysis involves discerning the particular features of a situation.

Analytical skills are used to gain a better understanding of a complex situation or problem. They involve the ability to visualize, articulate and solve complex problems and concepts and make decisions based on available information. Analytical skills include the capacity to evaluate that information to assess its significance, and the ability to apply logical and critical thinking to the situation. They provide the basis for a diagnosis of the cause or causes of a problem and therefore for its solution.

## Logical reasoning

If you say people are logical, you mean that they draw reasonable inferences – their conclusions can be proved by reference to the facts used to support them – and they avoid ill-founded and tendentious arguments, generalizations and irrelevancies. Logical reasoning is the basis of critical thinking and evaluation. It takes place when there is a clear relationship (a line of reasoning) between the premise (the original proposition) and the conclusion which is supported by valid and reliable evidence and does not rely on fallacious or misleading argument. Logical reasoning is what Susan Stebbing (1959) called ‘Thinking to some purpose’. Clear thinking is required to establish the validity of a proposition, concept or idea.

It is necessary to spot fallacious and misleading arguments. A fallacy is an unsound form of argument leading to an error in reasoning or a misleading impression. The most common form of fallacies which need to be discerned in other people’s arguments or avoided in one’s own can be summarized as:

- Affirming the consequent – leaping to the conclusion that a hypothesis is true because a single cause of the consequence has been observed.
- Begging the question – taking for granted what has yet to be proved.
- Chop logic – ‘Contrarywise,’ continued Tweedledee, ‘if it was so, it might be, and if it were so, it would be; but as it isn’t it ain’t. That’s logic.’ Chop logic may not always be as bad as that, but it is about

drawing false conclusions and using dubious methods of argument. For example: selecting instances favourable to a contention while ignoring those that are counter to it, twisting an argument used by an opponent to mean something quite different from what was intended, diverting opponents by throwing on them the burden of proof for something they have not maintained, ignoring the point in dispute, changing the question to one that is less awkward to answer, and reiterating what has been denied and ignoring what has been asserted. Politicians know all about chop logic.

- Confusing correlation with causation – assuming that because A is associated with B it has caused B. It may or may not have done.
- False choice – a situation in which only two alternatives are considered, when in fact there are additional options.
- Potted thinking – using slogans and catch phrases to extend an assertion in an unwarrantable fashion.
- Reaching false conclusions – forming the views that because some are, then all are. An assertion about several cases is twisted into an assertion about all cases. The conclusion does not follow the premise. This is what logicians call the ‘undistributed middle’.
- Selective reasoning – selecting instances favourable to a contention while ignoring those which conflict with it.
- Sweeping statements – oversimplifying the facts.
- Special pleading – focusing too much on one’s own case and failing to see that there may be other points of view.

## Critical thinking

Critical thinking is the process of analysing and evaluating the quality of ideas, theories and concepts in order to establish the degree to which they are valid and supported by the evidence and the extent to which they are biased. It involves reflecting on and interpreting data, drawing warranted conclusions and recognizing ill-defined assumptions.

‘Critical’ in this context does not mean disapproval or being negative. There are many positive uses of critical thinking, for example testing a hypothesis, proving a proposition or evaluating a concept, theory or argument. Critical thinking can occur whenever people weigh up evidence and make a judgement, solve a problem or reach a decision. The aim is to come to well-reasoned conclusions and solutions and test them against relevant criteria and standards. Critical thinking calls for the ability to:

- recognize problems and establish ways of dealing with them;
- gather and marshal pertinent (relevant) information;
- identify unstated assumptions and values;

- interpret data, to appraise evidence and evaluate arguments;
- recognize the existence (or non-existence) of logical relationships between propositions;
- draw warranted conclusions and make valid generalizations;
- test assertions, conclusions and generalizations;
- reconstruct ideas or beliefs by examining and analysing relevant evidence.

## Critical evaluation

Critical evaluation is the process of making informed judgements about the validity, relevance and usefulness of ideas and arguments. It uses critical thinking. Critical evaluation means not taking anything for granted and, where necessary, challenging propositions. It involves making informed judgements about the value of ideas and arguments. It uses critical thinking by analysing and evaluating the quality of theories and concepts in order to establish the degree to which they are valid and supported by the evidence (evidence based) and the extent to which they are biased. It means reflecting on and interpreting data, drawing warranted conclusions and identifying faulty reasoning, assumptions and biases. The arguments for and against are weighed and the strength of the evidence on both sides is assessed. On the basis of this assessment a conclusion is reached on which proposition or argument is to be preferred. Critical evaluation is required when testing propositions and evaluating the outcomes of research.

### *Testing propositions*

Propositions based on research investigations and evidence can be tested by using the following checklist:

- Was the scope of the investigation sufficiently comprehensive?
- Are the instances representative or are they selected simply to support a point of view?
- Are there contradictory instances that have not been looked for?
- Does the proposition conflict with other propositions for which there are equally good grounds?
- If there are any conflicting beliefs or contradictory items of evidence, have they been put to the test against the original proposition?
- Could the evidence lead to other equally valid conclusions?
- Are there any other factors that have not been taken into account which may have influenced the evidence and, therefore, the conclusion?

## ***Critically evaluating research***

Putting the outcomes of research as, for example, published in academic journals, to the test requires critical evaluation and the following checklist can be used:

- Is the research methodology sufficiently rigorous and appropriate?
- Are the results and conclusions consistent with the methodology used and its outcomes?
- Is the perspective adopted by the researchers stated clearly?
- Have hypotheses been stated clearly and tested thoroughly?
- Do there appear to be any misleading errors of omission or bias?
- Are any of the arguments tendentious?
- Are inferences, findings and conclusions derived from reliable and convincing evidence?
- Has a balanced approach been adopted?
- Have any underlying assumptions been identified and justified?
- Have the component parts been covered in terms of their interrelationships and their relationship with the whole?
- Have these component parts been disaggregated for close examination?
- Have they been reconstructed into a coherent whole based on underlying principles?

It is worth repeating that critical evaluation does not necessarily mean negative criticism; it means reaching a judgement based on analysis and evidence, and the judgement can be positive as well as negative.

## **Developing and justifying original arguments**

An argument as an aspect of critical thinking consists of a presentation of reasons which support a contention. It consists of:

- a proposition or statement which expresses a point of view or belief;
- the reasoning which makes a case for the proposition or point of view;
- a discussion, the aim of which is to get the reader or listener to agree with the case that has been made;
- a conclusion which sums up the argument and its significance.

### ***Developing an argument***

An argument is based (predicated) on a premise (the proposition) which sets out the underpinning assumption. There may be more than one proposition

or assumption. It could be phrased something like this: 'The argument is that A is the case. It is predicated on the assumption that B and C apply.' In a sense this suggests what conclusion the argument is intended to reach but it also indicates that this conclusion depends on the validity of the assumptions, which will have to be proved (there are such things as false premises).

## ***Justifying an argument***

The argument continues by supplying reasons to accept the proposition or point of view. These reasons have to be supported by evidence which should be based on valid research, rigorous observation, or relevant and verifiable experience, not on hearsay. It involves logical reasoning which avoids the fallacies referred to earlier and requires critical thinking which as described above means coming to well-reasoned conclusions and solutions and testing them against relevant criteria and standards. It also demands critical evaluation which, as mentioned earlier, means reflecting on and interpreting data, drawing warranted conclusions and identifying faulty reasoning, assumptions and biases. Assumptions have to be tested rigorously and research evidence has to be evaluated. The check lists set out in the previous section of this chapter can be used for this purpose.

## **Consultancy skills**

External management consultants who provide advice and help in introducing new structures and systems and solving problems need certain skills to carry out their often demanding jobs effectively. So do internal consultants who carry out a similar role within the organization. The skills required are:

- analysis and diagnosis;
- problem solving;
- critical thinking and evaluation;
- interpersonal – establishing and maintaining productive relationships with clients;
- interviewing – obtaining information and views from people;
- persuading people to adopt a course of action;
- case presentation;
- written communications, especially report writing;
- oral communications – making presentations and leading discussions;
- facilitating meetings and group discussions;
- planning and running learning and development events;
- coaching;
- project management.

## KEY LEARNING POINTS

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The processes of problem solving and decision making depend largely on effective analysis, critical thinking and evaluation and the use of consultancy skills.

### **Evidence-based management**

Evidence-based management is a method of informing decision making by making use of appropriate information derived from the analysis of HR policy and practices and surveys of employee opinion within the organization, systematic benchmarking and the messages delivered by relevant research.

### **Analytical skills**

Analysis is the process of gaining a better understanding of a complex situation or problem by breaking it down into its constituent parts and establishing the relationships between them.

### **Logical reasoning**

This involves clear thinking to establish the validity of a proposition, concept or idea.

### **Critical thinking**

Critical thinking clarifies goals, examines assumptions, discerns hidden values, evaluates evidence, accomplishes actions and assesses conclusions.

### **Critical evaluation**

Critical evaluation involves making informed judgements about the value of ideas and arguments.

### **Developing and justifying original arguments**

An argument as an aspect of critical thinking consists of a presentation of reasons which support a contention.

### **Consultancy skills**

External management consultants providing advice and help in introducing new structures and systems and solving problems need certain skills to carry out their often demanding jobs effectively. So do internal consultants who carry out a similar role within the organization.

## References

- Briner, R B, Denyer, D and Rousseau, D M (2009) Evidence-based management: concept clean-up time?, *Academy of Management Perspectives*, September, pp 19–32
- Pfeffer, J and Sutton, R I (2006) Evidence-based management, *Harvard Business Review*, January, pp 62–74.
- Simon, H (1957) *Administrative Behaviour*, New York, Macmillan
- Stebbing, S (1959) *Thinking to Some Purpose*, Harmondsworth, Penguin Books

## Questions

- 1 What is evidence-based management?
- 2 What does analysis involve?
- 3 What is logical reasoning?
- 4 What is a fallacy? (Give examples of three typical fallacies.)
- 5 What does critical thinking involve?
- 6 What is critical evaluation?
- 7 What approaches can be used to test propositions?
- 8 How do you critically evaluate research?
- 9 What does argument consist of?
- 10 How do you develop an argument?
- 11 How do you justify an argument?
- 12 What are the key consultancy skills?