

Candidate Support Pack

Decision Making for Managers

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Introduction

About this pack

Welcome to this candidate support pack. It has been designed to enable you to meet the requirements of the Decision Making for Managers Unit.

This Unit enables you to develop a consistent approach to decision making which will cover both routine and non-routine situations. This should help you to decide on an effective course of action to tackle the kind of problem that you will meet as a manager. The Unit introduces you to different models of decision making and takes you through the stages involved in making a decision. It also looks at evaluating decisions you have made which will help you to refine and develop your approach.

By undertaking this Unit and completing it successfully you should be able to:

- analyse models of decision making
- develop an approach to making decisions
- evaluate the decision making process.

How this pack is organised

This is an open learning pack — one that you can study on your own or with tutorial support. In this introduction there is an explanation of how this pack is organised and a description of the Unit.

The main part of the pack contains study notes covering all of the topics in the Unit. At intervals in the text there are activities which have three main purposes:

- to enable you to review your learning
- to prepare you for assessment
- to help you apply learning in your organisation.

Symbol used in the pack

As you work through the pack you will encounter a symbol indicating a task which you will be asked to undertake to improve or consolidate your understanding of the subject in general or a particular feature of it.



indicates that you should undertake an Activity.

Remember that the Activities contained within the guide are intended to allow you to check your understanding and monitor your own progress throughout the Unit. You will understand that to obtain maximum benefit the Comments on the Activities should only be checked out after the Activity has been completed. The Comments on the Activities are at the back of this pack.

Open learning and using this pack

If you are studying this Unit on an open learning basis you might want to take advantage of opportunities for:

- getting together with other people who are studying the same Unit
- finding a mentor with whom you can talk through your work
- obtaining tutorial support.

Recommended prior knowledge and skills

You should have a good working knowledge of what management involves, probably gained through work in a managerial position in an organisation. You should also have good communication and analytical skills which could be demonstrated by successful completion of management Units at SCQF level 8 such as Management: Leadership at Work or Management: Plan, Lead and Implement Change.

Core Skills

There may be opportunities to gather evidence towards Core Skills in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

Resources

Required resources

There are many suitable texts available and some of them are listed in the bibliography at the end of this pack. It may be possible to find these texts in the reference section of your local library or college library. Access to the internet will also provide a very large resource for articles on the subject matter of the Unit and again, several useful websites are included in the reference section at the end of this pack.

How the Unit is assessed

The assessment for the Unit may be based on a case study which will cover both routine and non-routine contexts. You will be given questions on the case study and asked to provide a report which tests your ability to analyse a situation and select a course of action appropriate to the problem encountered. You will also be required to evaluate this response.

Alternatively, the assessment could be based on an organisation with which you are familiar. You will be required to respond to a brief.

Your evidence to meet this Unit can be presented in the form of a report which should be about 4,000 words long.

Introduction to the study sessions

This pack provides the underpinning knowledge required by those studying this Unit and contains study notes for the three Unit Outcomes. The study notes are followed by a bibliography and a list of websites which provide sources of additional reading or information which you may access if you wish.

The material includes a number of Activities. Their principal aim is to help to make the pack an active experience for you, but they can help you in a number of other ways. They can:

- encourage you to think about how the ideas apply to your own experience
- give guidance on how you might use the ideas to help develop your own approach to decision making
- assist in analysing the process of decision making
- enable you to recognise the importance to organisations of making effective decisions
- direct you to additional sources of material which may help to reinforce your understanding.

Study Notes for Outcome 1 — Models of decision making

Introduction

These study notes cover Outcome 1, 'Analyse models of decision making'.

Decision making is something that we all do. It's also something that we do all the time. In fact a good starting point for this Unit may be to think about the decisions you have made so far today.

Activity 1.1: My decisions today



What decisions have you made so far today about what to do? List some of them below.

The above activity shows that we all have plenty of decision making experience. So, why should we study decision making? There are two main reasons:

- 1 Making decisions is one of the most significant things that managers do (it is, for example, one of the ten managerial roles identified by Henry Mintzberg (1973)).
- 2 It can help us to understand how we make decisions.

Both of these may enable us to improve the way we make decisions. By studying decision making we can build on and extend our current experience. As a result, we can develop an approach to decision making which can help us, as managers, to make good decisions — for ourselves, for those who work with us and for us and for the organisation. It may also help us to make better decisions generally and not just as managers.

As a manager, the decisions we make may not always be as familiar as the ones in Activity 1, particularly when we first take up a post with managerial responsibilities. If we have developed a sound approach to making decisions, then we should be able to cope more effectively with new and unfamiliar situations.

Outcome 1 sets the scene for the whole Unit and its main purpose is to explore the process that people go through when making decisions. The *process* of decision making is of critical importance in decision making. This is because following a recognised process is considered to be the most likely way to produce a good decision. Following a recognised process does not, however, guarantee that all decisions will be good. Circumstances may change, for example, or there may be a lot of uncertainty surrounding the decision. Following a recognised process can help, though, to reduce the risk of making a poor decision.

In fact, several different processes can be used to make decisions, although one particular process, known as the rational decision making model, is considered to be superior to other methods of decision making. However, for a number of reasons, it may not be possible when making a decision to follow all the steps of this model exactly. Nevertheless, the rational decision making model provides a benchmark against which to judge the way decisions are made. It is also very useful at highlighting the traps that decision makers can fall into and which may lead them to make poor decisions.

Outcome 1 explains the rational decision making model. It also looks at the problems with this model and why decision makers find that following the rational decision making model is not always straightforward. For this reason, we also examine some of the possible alternatives to the rational model.

After reading these study notes, therefore, you should be well aware of the rational model and of other decision making models. In other words, you will have the foundations on which to develop an approach to decision making which you can use in your current and future work roles. This approach is likely to be based on the rational model but will take account of the factors which affect the way it can be used. The study notes for Outcome 2 develop this approach to decision making by introducing a number of techniques which can be used to enhance the basic framework of the rational decision making model. The intention is to help you to develop a flexible and adaptive approach to decision making.

All being well, this will help you to make good decisions. However, as was mentioned above, following a suitable process does not always mean that a good decision is actually made. It is important to evaluate the outcome of decisions to check how effective the decision turned out to be. Outcome 3, therefore, is about evaluating the decision making process. The rational decision model is also important here because it provides a standard against which the decision making process can be judged.

The rational decision making model and alternatives to it are, therefore, the main focus of Outcome 1. However, before looking at the model, it is worth spending just a little time considering exactly what a decision is, even if this may seem obvious. Among other things, it can help to clarify the distinction between decision making and problem solving. It can also help to identify different types of decisions which you may encounter in your current and future work.

As you read through the text, try to follow the example of Activity 1.1 and think about decisions you have made or decisions which have affected you. The ideas in Outcome 1 apply to all decisions. Although many of your examples will probably be work-related decisions, you may find that domestic decisions or ones made outwith work are at least as good at illustrating the points in this Outcome and in Outcomes 2 and 3. As you will see, the Activities throughout the text encourage you to relate the material to your own experience.

1.1. What is a 'decision'?

Activity 1.2: Decisions . . . decisions



This develops Activity 1.1. List some decisions which have affected you at work. They may be ones you have made or ones made by others which have had an impact on you.

From this list, think of:

- (a) things that the decisions have in common, and
- (b) things that make them different.

It is clear from the above that making a decision involves making a choice about what to do. In broad terms, therefore, a decision can be seen as a commitment to a course of action.

Minkes (1987) points out that this approach has several benefits, including the following:

- It emphasises that any decision has positive and negative aspects — in order to make a decision at least one alternative course of action has to be discarded and cannot be pursued any longer, at least for the time being. This is the case even for simple decisions. Making a choice to have a cup of coffee, for example, means, at the very least, rejecting the option not to have one.
- Decisions are made in the present with consequences for the future — uncertainty is, therefore, an aspect of all decisions as, by definition, the future is uncertain. The degree of uncertainty will, of course, vary between situations. A decision to park in a well-lit car park with strong security safeguards is clearly less risky than choosing to park in a dark street in a run-down area.

Decision making is the process by which a choice is made between several courses of action. In other words, it is the process which results in a commitment to a course of action. Decision making can be distinguished from decision taking. Decision taking is the committing to a course of action and, as such is only one part of the process of decision making. As we shall see, this decision making process includes stages such as gathering information and identifying possible options as well as actually determining what action should be taken.

Elements of decision making

One of the leading writers on decision making is Herbert Simon (1965). He claims that there are three elements or stages in making any decision. They are:

- 1 finding occasions for making a decision — the intelligence activity; this is sometimes referred to as the ‘search activity’ (if there is no perceived need to make a decision, then there will be no decision making process)
- 2 finding and analysing possible courses of action — the design activity
- 3 choosing a course of action from among those available — the choice activity.

These three elements reinforce the point made above that decision making is a process which leads to a choice between two or more possible courses of action.

Activity 1.3: Process of decision making



You will come back to this process soon when you look at the rational decision making model. However, for the moment, it can help to think about the process you go through when making a decision.

Think about a decision you have made recently which was important to you. It may be a work related one or one from outside of work. Can you identify each of Simon's three stages:

- 1 Intelligence activity
- 2 Design activity
- 3 Choice activity

Decision making and problem solving

A decision can be distinguished from a problem. A problem occurs when there is a gap, or a mismatch, between what actually exists and what should exist. Managers may, for example, have to deal with a problem of absenteeism. The gap in this case is that present attendance at work differs from what is expected. Problem solving is the process of working out ways to resolve the situation by closing the gap.

One of the characteristics of a problem is that it does not normally have a single 'correct' answer. In order to emphasise this, a problem is sometimes distinguished from a puzzle — which is something that has a single solution. It may not always be easy to find but it does exist. A crossword would be a suitable example of a puzzle. The solution to a problem will involve a decision or decisions but these decisions relate to only one possible solution. If another way of solving the problem had been chosen different decisions might have been made. This helps to highlight the point made earlier that decisions are often made in conditions of uncertainty.

Another characteristic of problems is the problem as it appears may not be the actual problem. The term the 'presenting problem' can be used to describe the problem as it appears at first sight. In the above example, a manager may be aware that the person has been absent without a plausible reason for ten consecutive Mondays. This information may include the effects that the absenteeism has had on the amount of work being done as well as speculation as to why the absenteeism has occurred and suggestions on how to deal with the matter. The presenting problem, therefore, may be a mixture of symptoms, causes, desired end states and solutions.

The 'real' problem is the circumstances underlying the mismatch between the actual and the desired state. The first stage of problem solving is to diagnose what the problem is. In this sense, therefore, problem solving may be wider than decision making. Before it is possible to reach a situation where a decision has to be made it is necessary to find out exactly what the situation is. In the above example on absenteeism, investigation may reveal that the Monday absence is because the person concerned has had to change child care arrangements and has been unable to successfully do this for Mondays although all other days can be covered.

It is clear from the above that problem solving will involve some commitment to a course (or courses) of action. Once the real problem has been identified then it is necessary to decide on what to do in order to try to solve it. A problem, therefore, may be the spur to decision making in that it highlights that a decision about something does need to be made. Hence, although a decision and a problem are not the same, problem solving and decision making can be seen as part and parcel of the same thing. As you will see in Activity 1.7, the processes of problem solving and decision making have much in common.

Levels of decision making

The discussion above concentrates on the role of the individual in decision making. Buchanan and Huczynski (2004) point out, however, that decision making takes place at all levels in an organisation. They distinguish between individual, group and organisational decision making. The distinction is useful because it draws attention to the factors that might influence a decision and the consequences of it.

Decisions made on behalf of an organisation are likely to have a much wider impact than those taken by an individual, where decisions may only have an effect on the decision maker and, perhaps, a few others. Clearly, the number of people involved in the decision making process is also likely to be larger. This may require that some agreement has to be reached among the participants as to what course of action will actually be taken. Managers may, for instance, seek to establish some consensus among team members before proceeding with a new method of working.

The three levels overlap. Decisions which affect all parts of an organisation may be taken by one individual such as the Chief Executive. It is quite possible, however, that the Chief Executive will consult with others before deciding what to do. It is quite possible, also, that a decision by a group or an individual will not be taken in isolation. When taking decisions, for example,

individual managers may be influenced by the previous experience of the organisation as a whole.

Activity 1.4: Decisions at different levels



The Activities so far have asked you to think about decisions at an individual level — particularly ones you have made yourself.

This time try think of:

- (a) a group decision, and
- (b) a decision made at organisational level.

It is possible, especially for a group decision, that you can think of one which you have been involved in making. In what ways do these levels of decisions differ from ones you have made yourself at an individual level?

1.2 Types of decisions

It is clear from what has been said so far that there can be considerable variation between decisions. They can have far reaching consequences for an organisation or they may just affect a single decision maker. They may, for example, be ones that are taken regularly and which involve little thought. On the other hand, they could be decisions which are new and unfamiliar to the decision taker and where it is not easy to know just how to proceed. It is useful, therefore, to consider different types of decisions because the type of decision may have an influence on the process by which the decision is made.

In fact, decisions can be classified in a number of different ways. One well-known typology was originally suggested by Ansoff (1968). This identifies three types of decision which can be described as follows:

- strategic decisions — long term decisions about the overall direction or strategy of an organisation, eg whether or not to embark on a new activity
- tactical decisions — short term decisions about doing things efficiently and effectively within the existing strategy, eg recruiting new personnel; allocating budgets; introducing new procedures
- operational decisions — day to day decisions about operational activities, eg allocating personnel to particular tasks; ordering new supplies.

It is not always easy to distinguish between these types of decisions as things can depend on circumstances. Allocating personnel to tasks could, for example, reflect a new strategic direction for an organisation or it could simply be a way of ensuring that a day's operational work is completed on time.

Nevertheless the above reinforces the idea of levels of decisions and helps to show that decisions can vary considerably in their importance and impact. It is likely, for example, that most decisions by first line managers will be operational decisions about meeting day-to-day targets and objectives.

Perhaps the most widely used classification of decisions is Herbert Simon's (1965) distinction between programmed and non-programmed decisions. A programmed decision is one that has been made frequently so that there are established rules and procedures for dealing with it. Examples of programmed decisions would be ordering new office supplies. Programmed decisions, therefore, tend to be routine and are used when situations are structured and clear. When a decision needs to be made the requisite procedure is invoked.

A non-programmed decision, on the other hand, is one for which there are no set rules or procedures. It is unusual and may never have occurred before. Unlike programmed decisions there may be limited information, the situation may be unstructured and it may not be clear exactly what decision or decisions are required.

Programmed and non-programmed decisions are the opposite ends of a continuum. All decisions, therefore, can be seen as more or less programmed (or non-programmed). Decisions can move along the continuum, usually from non-programmed to programmed. The first time any decision is made, it is likely to be non-programmed. However, if the same situation recurs several times, then some system of dealing with it is likely to emerge. Rules and procedures will be developed in the light of experience and can be drawn on and modified each time a similar decision is required. Over time, what was originally a non-programmed decision will resemble more and more a programmed decision.

Activity 1.5: Programmed and non-programmed decisions (or routine and non-routine decisions)



Can you think of an example from your own work experience of a programmed and non-programmed decision?

In principle, programmed decisions can be made automatically using information technology. This is why Simon chose the term in the first place. Davenport and Harris (2005) argue that computerised decision making has been slow to develop but recent developments in software applications mean that it is possible to embed automated decision making into the normal flow of work. They give the example of financial decisions relating to loans and mortgages.

The implication of changes like this is that programmed decisions do not require managers to do anything. Even if decision making is not automated, managers will deal with programmed decisions by applying a process which has already been put in place. In this respect programmed decisions may not require any managerial judgment.

Some people have identified different types of non-programmable decisions. Minkes (1973) refers to simple and complex decisions where the former involve relatively few people, carry limited risk and are fairly well structured. By contrast the latter have several dimensions and may affect many people.

Mintzberg et al (1976) identified three different types of situations which require a decision to be made. They are:

- crisis — a sudden or unexpected event which requires immediate action (this may well require a rapid decision or decisions)
- problem — something which becomes apparent gradually over time but is not clear cut, at least in the early stages (the absenteeism referred to earlier is an example and, as we have seen, this will require a decision or decisions in order to resolve the problem)
- opportunity — a chance to do something (this is usually created by a single event and normally requires a rapid decision or decisions in case the opportunity is lost).

In a similar vein, Buchanan and Huczynski (2004) refer to adaptive decisions and innovative decisions. Adaptive decisions are ones requiring human judgement. These are decisions which cannot be programmed by a computer but they may be ones where decision makers can use decision making techniques to help them. Innovative decisions are ones for which there is no precedent and the whole decision making process must start from scratch.

All these various classifications have much in common. In broad terms they make a distinction between routine and non-routine decisions and indicate that the latter may be made in a range of different circumstances. Essentially, the more routine a decision is the more likely it is that there will be established rules and procedures. In these cases, decision makers will exercise little, if any, judgement.

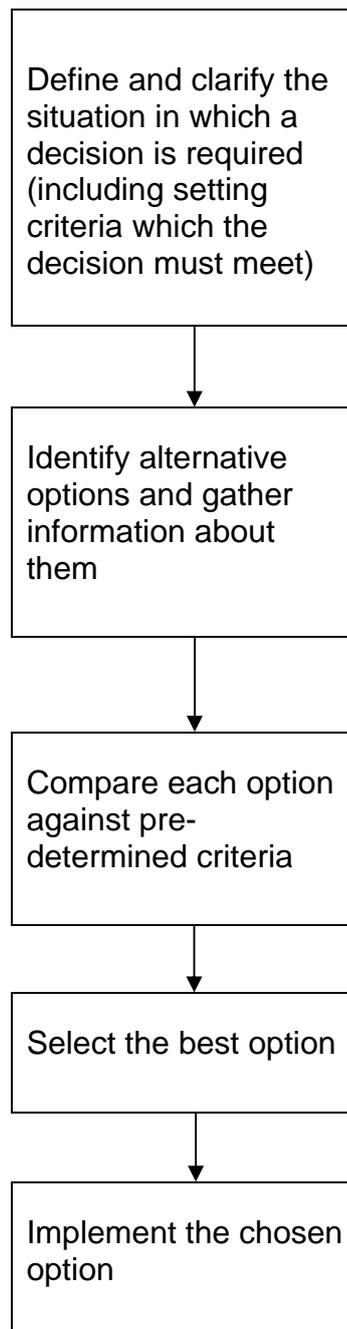
This text will concentrate on non-programmed decisions, since these are the ones which require managers to exercise judgement. For non-routine decisions such as these, managers have to go through a decision making process for themselves in order to determine the course of action they will commit to.

It is now time to go on to examine the decision making process and the rational decision making model in particular.

1.3 Rational decision making model

The rational decision making model has its origins in economics. It is a series of steps which will lead to the best possible, or optimum, decision in the circumstances.

The stages of the rational decision making model can be described as follows:



The model can be illustrated using the house purchase example from Activity 1.3 (see also Comment on Activity 1.3).

Stage in the rational model	Example
Define and clarify the situation in which a decision is required	Realise that there is a wish/requirement to move house — the decision is which new house to buy
Identify alternative options and gather information about them	Find out about properties available, where they are, how much they cost, what mortgage deals are available
Compare each option against pre-determined criteria	Take each available property and match it against criteria set earlier, eg price range, location, number of rooms etc
Select the best option	Pick the property that fits the criteria most closely
Implement the chosen option	Put in an offer, ie the first stage of buying the new house

Activity 1.6: Another example



Can you think of another example which would illustrate the rational decision making model? It may be one from work or one from outwith work, eg deciding where to go on holiday. Write out examples of each stage below:

- Define situation
- Identify alternative options
- Gather information on options
- Choose best option
- Implement decision

The rational decision making model fits well into Simon's three elements of a decision.

Simon's element	Example
Intelligence activity	Define and clarify the situation in which a decision is required
Design activity	Identify alternative options Gather information about them
Choice activity	Compare each option against pre-determined criteria Select the best option Implement the chosen option

You may well have come across the rational decision making model before. If so, you may have found that there are slight differences between the descriptions of the stages above and the ones you have already seen. Similarly, if you look at texts which cover the rational model you will find that the exact statement of the steps in the model varies.

Some of the differences you find may include:

- a stage described as ‘establishing criteria which the answer must satisfy’ — this usually appears before the stage on identifying possible options and after the stage on clarifying the situation
- an initial stage described as ‘recognition of a problem’ or ‘sensing that a problem exists’
- a stage of gaining acceptance and agreement from others before implementing the decision
- a final stage described as ‘evaluation’.

Generally, these reflect the personal preferences of the writer and do not alter the main steps of the model. For example, some writers feel that since pre-established criteria must be used to evaluate options, then there should be a specific stage during which this is done. In their view, this is preferable to combining setting pre-established criteria with defining and clarifying the decision.

Recognising that a decision will need to be made is also included in the defining stage above. This actually illustrates the links between decision making and problem solving. This ‘recognition’ stage is the one at which a problem becomes apparent and the need for a decision or decisions arises.

Gaining acceptance for a decision is vital if a decision is to be implemented successfully. As you will know from your own experience, people are often unwilling to carry out a decision that they do not agree with or where their views have not been taken into consideration. Nevertheless, this can be considered as part of the implementation stage — albeit a very significant part.

The final bullet on an evaluation stage does, however, add something which is perhaps not in the diagram on page 17. The reason for its omission is that evaluation is not part of the decision making process itself. It is something which takes place after a decision has been made and implemented. For example, when you come back from holiday you may spend time thinking about whether you have made a good choice and why. Evaluation, therefore, is important as it provides a way of learning from experience and of improving the way the decision making process is carried out. It is discussed in Outcome 3.

Activity 1.7: Other statements of the rational model



If you wish you can search for other ways of setting out the steps in the rational model. You could do this by entering 'decision making' or 'rational decision making' into a search engine.

But be warned — you'll get many millions of hits!

If you do this then you can compare the various different ways and you should see that the basic process is the same.

When you were doing Activity 1.7, you may also have recognised that the rational decision making model is also used as a model for problem solving. Sometimes it is described as the rational problem solving model.

This is not really surprising. Remember back to section 1.1 and the difference between decision making and problem solving. A problem exists when there is a gap between what actually exists and what should exist. In order to solve the problem it is necessary to commit to a course of action. In other words, a decision has to be made.

Although, as we have seen, there are many ways of expressing the stages of the rational decision making model, for convenience and for consistency this material will adopt the model given at the start of section 1.3. To remind you, it is:

- Define situation
- Identify alternative options
- Gather information on options
- Choose best option
- Implement decision

The main point about the rational decision making model is that, if the process is properly followed, it should result in the best possible decision in terms of the criteria set for judging the decision. This is because all possible alternatives are identified and evaluated. All except the best one are rejected.

Uses of the rational decision making model

Following the steps of the rational model, therefore, should help managers come to the best decision they can in each set of circumstances. For this reason, the rational decision model is widely used in training courses on decision making for managers. It is often presented, for example, as a management tool or skill which all managers should have.

This represents one of the main uses of the rational decision making model. Firstly, it provides a basis for training people to make better decisions.

Two other important uses of the rational model follow on from this first use. Secondly, the model can be used as a basis for developing techniques which can improve decision making. Outcome 2 considers some of these techniques. Thirdly, the rational decision making model provides a benchmark against which decisions can be evaluated. This can be done by comparing the actual process followed to make a decision with the steps of the rational model. By doing this it may be possible to explain why a decision turned out to be successful or unsuccessful. Evaluation is discussed in Outcome 3.

There is a fourth use of the rational model and this is one that is particularly helpful to managers. This is that the rational decision making model can help managers to develop a practical and effective approach to decision making.

In many respects the rational decision making model represents the ideal way to make decisions. Where decisions are routine or programmed it is relatively straightforward to follow all the steps. Making a decision is, as previously discussed, a matter of going through the relevant procedure. However, as hinted in Activity 1.6, for non-routine or non-programmed decisions, it is not always possible for managers to follow all of the steps of the model exactly. In fact, managers and others often make these decisions in a manner which does not fit the rational decision making model. Sometimes this can lead to poor decisions which may have considerable adverse consequences which may last for a long time.

Managers need, therefore, to develop an approach to decision making which enables them to take good decisions but also takes account of the fact that, for non-routine decisions in particular, it may be difficult in practice to follow the rational decision making model exactly. The use of the rational decision making model is that it provides the framework for developing a suitable approach.

The first step to developing your own approach to decision making, therefore, is to examine some of the difficulties with the rational model. These can help to explain why it may not be possible to follow the steps of it and why alternative approaches to the rational model have been suggested. These, too, may help you in working out a suitable decision making approach.

1.4 Alternatives to the rational decision making model

This section begins by considering some of the difficulties in applying the rational decision making model. These drawbacks highlight potential traps and dangers which can lead to poor decisions. The difficulties associated with the rational model have also led to a number of suggestions for alternative approaches to decision making. For this reason, the drawbacks of the rational model and alternatives to it tend to overlap. It will be helpful to bear this in mind as you read this section.

Difficulties in applying the rational model

The difficulties of applying the rational model come next and they are followed by some of the suggested alternatives to the rational decision making model.

Activity 1.8: Problems with the rational model



(In many respects this activity is similar to Activity 1.6 except the emphasis here is on a decision which did not follow the rational model.)

Your own experience is a good starting point to look at some of the difficulties in applying the rational model. Can you think of a decision which could be described as a poor (or even a bad) decision? It could be one that you made yourself — at work or elsewhere. It could be one made by someone else which affected you — again at work or elsewhere. It could be one that you know of — from your work experience, perhaps — but with which you were not personally involved. It could be a well-known and well-publicised event.

Depending on the decision you choose, you may not know of all the steps in the decision making process. However, on the basis of what you do know, compare the steps of your decision with the steps of the rational model? How can it help to explain what went wrong?

The above activity confirms the point made before that applying the rational model may be difficult because managers and other decision makers find it hard to follow each stage of the model. It may be helpful, therefore, to look at each stage and consider what difficulties each stage might present.

Table A

Stage in the rational model	Possible difficulties in applying the stage
Define and clarify the situation in which a decision is required	<ul style="list-style-type: none"> • Information needed to clarify the problem may be difficult to find (it may not be clear what information is actually needed) • Information may be time consuming or costly to obtain • Information may be out of date or inaccurate • It may not be possible to reach agreement on the situation requiring a decision
Identify alternative options and gather information about them	<ul style="list-style-type: none"> • All available alternatives may not be identified because there are too many possibilities and not enough time • Unlikely that decision maker(s) will be able to think of all possible alternatives • Information may suffer from similar deficiencies to those noted in the definition stage • Consequences of all alternatives cannot be accurately estimated because of lack of information and uncertainty about what will happen in future • Some alternatives may be seen as more valid than others because they have been suggested by powerful people or have worked successfully before — they may therefore be subject to less scrutiny • Individuals, regardless of ability, are unable to process all the information available about alternatives because of the amount available

Table A continued

Stage in the rational model	Possible difficulties in applying the stage
Compare each option against pre-determined criteria	<ul style="list-style-type: none"> • Available information may be incomplete, inaccurate etc (see above two stages) • Comparison is time consuming and not always easy to do • Criteria for comparison may be influenced by pressure groups, powerful individuals such as CEOs (and, therefore, reflect their interests) • Individuals may be biased in favour of some options and against others (eg some options may benefit them while others do not) so any comparison is skewed • Comparison of options may involve mental calculations which may be difficult or impossible (eg the need to process a lot of information)
Select the best option	<ul style="list-style-type: none"> • Biases towards particular options (see above) • Choice may be influenced by powerful individuals, past experience etc which means that an objective choice cannot be made • Lack of suitable information and time constraints (see above) • What seems to be the best option may be unacceptable to important people who may be affected by the decision
Implement the chosen option	<ul style="list-style-type: none"> • Decision may not be implemented in exactly the way it was decided — because of lack of time and other resources • Pressure groups who oppose the decision may attempt to frustrate any implementation

Activity 1.9: Routine and non-routine decisions – again



It can be argued that the above difficulties apply to non-routine (non-programmable) decisions but are less valid for routine (programmable) decisions. Do you agree?

The difficulties in Table A can be attributed to four main factors which influence the way the rational decision making model is used in practice. They are process factors, political factors, organisational factors and socio-cultural factors (ie ones in the wider society). These factors overlap with each other but they do provide a useful framework for considering the difficulties of applying the rational model and the alternatives to it. Each of them can be considered in turn.

- **Process factors** are reasons which make it difficult to follow the steps in the rational decision making model. In other words, the process of the rational model is not followed in exactly the way the model says it should be. There is evidence, for example, that nobody, no matter how intelligent or capable they are, has the mental capacity to process all the information needed to consider all possible options.
- **Political factors** are related to power. The decision making process can be affected by the power that some people or groups may have. This can, as Table A indicates, enable them to make sure that decisions favourable to them are taken. The final decision, therefore, may be good for them but may not be the best possible decision which could have been taken.
- **Organisational factors**, as the name suggests, arise from the fact that organisations develop patterns of behaviour which can influence the way members of the organisation make decisions. These organisational ‘norms’ can mean that all steps of the rational model are not followed exactly. These norms affect everybody in the organisation and can grow up and develop over time. For example, ‘rules of thumb’ or heuristics may develop in organisations. One common one is to follow precedent. This means that, when faced with a situation that looks similar to one that has occurred before, decision makers are expected to take the same decision. Taking this course of action is considered to be the ‘norm’ and people act in accordance with the norm. However, this means that all the steps of the rational model may not be followed. Few if any alternative courses of action may be considered, for example,

and, if they are, they may all be evaluated against the precedent rather than on their own merits and drawbacks.

- **Socio-cultural factors** are similar to organisational factors but, in this case, the norms are those which prevail in a society as a whole. This can be illustrated by an example of eating meat. Cultural attitudes in the UK are such that the meat of some animals such as horses or dogs is not usually eaten. Indeed, most people in this country would consider eating such meat repulsive, although in other societies doing so is quite acceptable. In terms of the rational decision making model, this means, for example, that socio-cultural factors would prevent people in the UK considering some possible alternatives when deciding what meat to eat. In a similar way, cultural and social factors can affect decisions made at work. Over the last two decades, for example, views on the operation of publicly funded organisations have changed. They are now expected to adopt a business-like, customer oriented approach to what they do. Possible alternative courses of action, therefore, have to be evaluated in the light of these requirements which can influence the option chosen as well as which options are considered.

The purpose of the above is to illustrate the range of factors which can affect the rational decision making model and which may make it difficult to apply. The list also demonstrates another important point: for non-routine (or non-programmed) decisions, following every step of the rational decision making model perfectly may be rare. The rational model, therefore, may be an ideal which it is impossible for any decision maker to meet, however competent and capable he or she is.

However, the difficulties do not necessarily mean that the rational model has no value to decision makers. It still, for example, represents a framework which can be useful to managers who have to make non-routine decisions. The steps of the model provide a process which decision makers can go through to help them make effective decisions.

Nevertheless, the difficulties above have led many writers to suggest that the pure rational decision making model should be modified or replaced. This leads on to the second part of this section, which is alternative to the rational model.

Some alternative approaches to decision making

A large number of alternatives to the rational decision making model have been made. Many of them are described as more 'realistic' than the rational model. They are useful because they can help you to develop your own approach to decision making.

As noted at the start of section 1.4, the difficulties of the rational model and the alternatives to it tend to overlap. Many of the alternatives stem from the drawbacks of the rational model. Most tend to concentrate on one or two of the four factors outlined above.

We are now going on to consider some of these alternative approaches. Once this has been done it should be possible to draw some conclusions about how the difficulties of the rational model and the alternatives to it may influence the way in which you make decisions.

Activity 1.10: Applying the alternative approaches



As you read through the alternative decision making models try to think of examples from your own experience of where each might apply. Remember that the alternatives are usually intended to be more 'realistic' than the rational model.

The above activity can be applied to each of the alternative approaches considered. (Eight possibilities are discussed here.) They have been chosen to illustrate the various alternatives which have been suggested and to exemplify the factors discussed above. They should help you to think about how you make decisions and what factors you should bear in mind when doing so. These are:

- 1 Intuition
- 2 Incrementalism
- 3 Satisficing and bounded rationality
- 4 Action rationality
- 5 Cyert and March — The Behavioural Theory of the Firm
- 6 Power and politics
- 7 Organisational learning
- 8 Garbage can model

Alternative approach 1: Intuition

A strength of the rational decision making model is that it is a logical, systematic approach. On the other hand, logic implies that emotion and intuition play no part in decision making. Hayashi (2001) points out that a number of studies have found that managers often make decisions on the basis of intuition or ‘gut reaction’. Managers decide what to do on the basis of a feeling that this is the best thing to do. Malcolm Gladwell (2005) in his book, *Blink*, makes a similar point. He argues that many decisions are made very quickly on what appears to be a snap judgement.

It is often claimed too that the logical approach of the rational model can inhibit creativity in that it does not encourage decision makers to look for innovative or unusual courses of action. This is particularly likely when a decision on how to tackle an unusual or awkward situation is required.

In circumstances like this, decision makers often find it hard to explain why they have made the decision they have. The only explanation they can give tends to be that it seemed to be the right thing to do. Decision makers often say they got a sudden flash of insight but usually do not know where it came from.

Activity 1.11: Intuitive decisions



Can you think of an example of a decision you have made which came as a result of a ‘flash of insight’ or a ‘hunch’? Can you explain where it came from?

Hayashi (2001) argues that emotion and intuition are essential aspects of decision making. He also claims that good decision makers can be distinguished from less good ones by their use of ‘gut reaction’ and intuitive feelings. This is because it makes them alert to possibilities which others may not consider.

In a sense, his explanation fits in with the rational model in that intuition may help people evaluate alternatives quickly. It may help them identify a wider range of options and to decide on valid criteria for deciding between them. Gladwell (2005) reinforces this view by arguing that accumulated experience and knowledge may enable people to make decisions very quickly. People may have developed the ability to very quickly identify and evaluate the critical factors relevant to a decision. Gladwell (2005) refers to this as ‘thin-slicing’. Driving a car may be an example. Experienced drivers often know instinctively when it is safe to overtake or brake

and can, often without conscious thought, anticipate the actions of other road users.

However, while there is evidence that intuition and emotion may have a role in decision making, there are grounds for being cautious. Morse (2006) makes the obvious point that emotion can lead to hot-headed decisions which prove to be unwise. A similar point is made by Bonabeau (2003) in an article with the very direct title of ‘Don’t Trust Your Gut’. He argues that compared to reason and analysis, intuition can be fickle and undependable.

Hayashi (2001) himself emphasises that instincts are often wrong. Intuition can lead to people ignoring significant factors in a situation and making very rash decisions. He reinforces this by pointing out that successful decision makers who claim to make instinctive decisions also have systems which involve them in continually checking what they have done and, where necessary, revising and changing what has been decided.

Activity 1.12: Remembering Activity 1.10



Intuition is the first alternative approach. So don’t forget Activity 1.10 and think about how you might apply it to your situation.

Alternative approach 2: Incrementalism

This is step-by-step decision making and is associated with Charles Lindblom (1959). In his view, the rational decision making model assumes that all concerned agree on a number of factors. There must be consensus, for instance, on what the decision should be about and that the suggested alternatives are pertinent to the decision. Lindblom argues that this is unlikely.

He suggests, therefore, that decisions involve doing something which is not too different from what has been done before. In other words, it involves an incremental change from the previous situation. When deciding what to do, decision makers pay attention to the existing situation and move away from it in small steps. They do not follow the stages of the rational model. They do not, for example, try to identify all possible alternatives as the rational model suggests or gather a lot of information about these alternative possibilities.

Activity 1.13: The benefits of incrementalism



What benefits do you think managers might gain from an incremental approach to decision making? If you can think of any examples, try to contrast them with examples of decisions which involved considerable change.

Incrementalism may have as many lessons for implementing decisions as it does for the actual decision making process itself. It may discourage decision makers from looking at all options and encourage them to stick closely to what is being done at present rather than exploring the range of possibilities that could exist.

Before reading on, remember Activity 1.10. How does incrementalism apply in your experience?

Alternative approach 3: Satisficing and bounded rationality

These concepts are associated with Herbert Simon (1965). His work on decision making has been very influential and his ideas on the elements of decision making and on programmed and non-programmed decisions have been mentioned earlier in this section. He was awarded the Nobel Prize for Economics in 1978.

Satisficing means making a decision which is satisfactory. The rational decision making model claims that decision makers will follow a process which will lead to the best possible decision. Simon argues that it is not possible and, instead, they will look for a course of action which is 'satisfactory' or 'good enough'. Once this has been identified, they will not look any further. In Simon's own phrase, decision makers will keep searching for the sharpest needle in the haystack but will stop looking as soon as they find one that is sharp enough to sew with. This could, of course, mean that a decision is made on the basis of the first option considered.

You may find it helpful to go back to Table A earlier in this section and remind yourself of the various difficulties with the rational decision making model. This may help to reinforce Simon's ideas on the extent to which the rational decision making model does not reflect the reality of managerial decision making.

Activity 1.14: Satisficing and incrementalism



Both these alternatives are firmly based on the view that following the rational decision making model may not be practicable.

To what extent are they similar?

Simon argues that satisficing occurs when decision makers operate within what he calls 'bounded rationality'. This means that rationality is constrained because it is impossible for decision makers to follow the steps of the rational model. The human mind, for example, cannot physically process all the various options which may be available in any one situation, nor is there time to go through all the various possibilities that may exist.

The use of the phrase 'bounded rationality' is important. Although they may not follow the steps of the rational model exactly, decision makers do adopt a reasoned approach to decision making. Simon's main emphasis is that going through the process of the rational model in its pure form is not realistic, but this does not mean the basic framework of the model will not be followed. In fact, decision makers will have to do this in order to make a reasoned decision. Hence, decisions will not be irrational even though the steps of the rational model have not been followed exactly. Bounded rationality therefore does not necessarily lead to poor decisions.

One way to understand this is to look at what Bazerman and Chugh (2006) call 'bounded awareness'. Bounded awareness occurs when decision makers do not take account of relevant, accessible information during the decision making process. It occurs at three particular points in the decision making process:

- 1 decision makers may not seek out important information which they need for a sound decision
- 2 decision makers may fail to see the relevance of some information which they do have
- 3 decision makers may fail to share information with others.

There may be several reasons for this 'blindness' or lack of awareness. One factor may be because decision makers focus only on issues which they are conditioned to think are important. The Swiss watch making industry, for example, invented quartz technology but, because of its history and expertise in mechanical watches, did not think it was important. When making decisions about the future of the industry, those involved thought only about mechanical watches.

Bounded rationality means that a satisfactory decision would take account of relevant information. This is because this would be important in deciding whether or not an option was satisfactory. Hence, while bounded awareness may well lead to poor decisions, bounded rationality may not.

Before reading on, remember Activity 1.10. How does satisficing apply in your experience?

Alternative approach 4: Action rationality

This has been suggested by the Swedish writer, Nils Brunsson (1982). Like many others, including Simon, he believes that decision making is a critical part of management. He argues that managers are interested in getting things done. Therefore, decisions are important because they lead to actions.

This is, of course, consistent with the definition in section 1.1 that decision making is a commitment to a course of action. By making a decision, therefore, managers accept responsibility for getting the action carried out and become accountable for the consequences of these actions.

Brunsson points out that the rational decision making model could, in its pure form, have negative consequences. Identifying various options and weighing each of them up could cause confusion about what will eventually happen and may give an impression of uncertainty and lack of commitment. Managers have good reasons, therefore, for short-circuiting the rational model.

Before moving on, remember Activity 1.10. How realistic do you think action rationality is?

In many ways, action rationality reinforces the alternative approaches of incrementalism and satisficing. All three suggest that deviations from the ideal rational model are likely to be the norm. However, all take a slightly different perspective. Action rationality concentrates more on why managers make decisions and argues that managers' bias towards action means that they do not follow the rational model. It does not consider what process decision makers follow instead of the rational model. The implication is that they do use techniques like incrementalism or

satisficing. Action rationality is also useful in that it draws attention to the context in which a decision is made.

Alternative approach 5: Cyert and March

Richard M Cyert and James G March (1963) both worked with Herbert Simon at Carnegie-Mellon University in Pittsburgh, USA. They share Simon's ideas on bounded rationality and his views on the rational decision making model. They applied these particularly to the decision making in organisations in a book called *The Behavioural Theory of the Firm*. By doing this, they considered both process and political factors which affect decision making.

They argue that decision making in organisations is affected by four main factors. They are:

- quasi-resolution of conflict
- uncertainty avoidance
- problemistic search
- organisational learning.

Each of these will be explained in turn.

Quasi-resolution of conflict relates to the fact that most organisations consist of a number of different departments or groups, each of which has different interests and priorities, although all will be working towards the same broad organisational goals. These different interests and priorities may conflict with each other. Resolving these conflicts can be difficult and disruptive. As a result, organisations tend to tackle the problem by operating in ways that minimise open conflict between different departments. In other words, conflicts are not fully resolved but continue to exist below the surface. This has an effect on how decisions are made.

For example, decisions are likely to be made within the confines of particular departments. In this way, they have limited impact on what happens elsewhere. Cyert and March refer to this as 'local rationality'. There is, of course, the possibility that decisions made in different departments may be inconsistent with each other. However, this problem can be avoided if the organisation accepts a low level of consistency between decisions — which Cyert and March call 'acceptable decision rules'. In addition, Cyert and March claim that organisations display 'sequential attention to goals'. This means that organisations pay attention to goals one at a time. In this way, the chance of inconsistencies and incompatibilities emerging is reduced.

All these mean that there will be deviations from the rational model. For instance, the alternatives identified are likely to apply only within the department concerned, while any solution and its implementation will also be confined to that department. In some cases, decisions will be postponed until something else is decided.

The available options in any one case may well reflect only one of the organisation's goals or objectives and pay little or no attention to others.

Activity 1.15: Departments and decision making



Think about your own department and your own organisation. To what extent does your organisation have different departments with different interests that sometimes conflict?

How does this affect the decisions made in your department?

Uncertainty avoidance reflects the fact that organisations have to deal with uncertainty. A commercial organisation cannot know what its competitors will do, while publicly funded organisations may not be able to predict the actions of government or other funding providers. Decisions therefore reflect short run responses to short term feedback.

Problemistic search is closely associated with uncertainty avoidance. Once a problem is identified, decision makers are motivated to search for a solution. This search is simple minded and is closely linked to the previous solution. It is also biased by the particular background and experience of the decision maker. Once a suitable solution has been found, the decision is made and the search stops.

Organisational learning — decision making is, however, a learning process. Over time decision makers in an organisation learn what will be acceptable and practicable and also what will not be permissible.

Activity 1.16: Cyert and March, incrementalism and satisficing



You may have thought that there were some similarities between Cyert and March's Behavioural Theory of the Firm and some of the alternatives we have already looked at.

What do you think they are?

Alternative approach 6: Power and politics

This approach takes into account the influence of organisational politics on decision making. This approach was introduced above in Cyert and March's Behavioural Theory of the Firm which also helps to illustrate how political factors and power can affect the way decisions are made. Activity 1.15, for example, was about how conflict between departments may be avoided by making decisions which only take into account the interests of a particular department.

Some departments, or individuals may, however, be more powerful than others. One way to illustrate this is to consider some of the sources which may give people or departments power.

- expertise — someone with ability and knowledge in information technology may be able to influence decisions because of this
- control of information — some people or departments may be able to control the flow of information (eg by deciding on which reports should be circulated)
- position in the organisation — some individuals may be powerful because of their position in the organisation and this may enable them to influence both what decisions are made and how these decisions are made.

Factors like these mean that the steps of the rational decision making model will not be followed exactly. An expert may, for instance, have considerable influence in the evaluation of options so that the one which s/he favours is chosen. Others who lack this expertise may be unable to challenge the arguments put forward by the expert.

Activity 1.17: Power and decision making



Can you think of any examples in your own experience where a department or an individual used their power to influence the decision making process?

If you can, try to think of where their power came from and how this enabled them to affect the decision that was made.

Power and politics may have an impact on your own approach to decision making. The most likely effect is that you may have to take account of your own position and power, and that of others, when making decisions. You may, for example, have to make a different decision from the one you would like to make because others have the power to oppose your preferred course of action.

So, don't forget Activity 1.10. How could power and politics affect your approach to decision making?

Alternative approach 7: Organisational learning (rules of thumb)

This approach, like the previous one of power and politics, is introduced in the discussion of Cyert and March's Behavioural Theory of the Firm. There are a number of different facets to this approach, two of which will be considered here.

The first is the development of 'rules of thumb' to guide decision making in an organisation and the second is the impact of organisational culture on decision making.

Organisational rules of thumb or heuristics, to use the technical term, have been mentioned already. These are short cuts which develop in organisations as a way of simplifying complex situations. By making use of them, decision makers can find a way to decide what to do in situations which might otherwise prove to be difficult. These rules of thumb grow up over time within organisations. As a result, they vary between organisations, although there are often strong similarities between different organisations.

Activity 1.18: Rules of thumb (heuristics)



Can you think of any examples of rules of thumb which apply in your organisation?

Rules of thumb are shortcuts and using them means that the rational decision making model will not be followed perfectly. Selective perception, for example, means that some items of information may not be considered or that some options may not be explored.

Rules of thumb can be dangerous because they can lead to biases in decision making which can result in poor organisational decisions. This often happens when the rule of thumb is that ‘what’s worked for us in the past will work in the future’. Lavallo and Kahneman (2003), for example, point out that decision makers can see previous experience through ‘rose tinted glasses’. As a result, they make over-optimistic forecasts about the likely consequences of a decision.

One rule of thumb which can cause over-optimistic estimates is an organisational practice that it is important to provide objectives which stretch departments or individuals.

Activity 1.19: Over-optimism and ‘rules of thumb’



The danger of rules of thumb is worth pursuing because it has strong implications for your own approach to decision making. It is a good example both of the importance of alternatives to the rational model and of why the rational model remains useful.

Can you think of any decisions in your organisation which were confidently expected to result in great benefits but, in actual fact, did not work out as intended?

If you can, why do you think this happened?

Rules of thumb do not necessarily lead to poor decisions. They may be an essential and necessary part of the way decision makers cope with the work they have to do. However, as with intuition, it is important to recognise that they may not always produce the desired outcome.

The culture of an organisation can also have an influence on the way decisions are made. Organisational culture can be described as ‘the way we do things around here’ and it represents the shared meanings and perceptions that people in an organisation have. It is clearly one source of organisational rules of thumb and, like them, people within an organisation may not recognise its culture because it is an integral part of how they behave. It is only when faced with what goes on in other organisations (eg after a merger or take-over or when moving to a new job) that people realise what ‘the way we do things around here’ consists of.

One aspect of culture which is common to many organisations and which can affect decision making is conservatism. This is a feeling that things are unlikely to get better and will probably get worse.

This may mean for example that the first stage of the rational model — define and clarify a situation in which a decision is required — may be interpreted to mean that, if at all possible, no decisions should be made.

Activity 1.20: Organisational culture and decision making



Can you think of any examples of how the culture of your organisation may affect the way decisions are made?

(You may find this hard. It's not easy to recognise aspects of organisational culture because it is a normal part of what we do. Sometimes, it can help to compare two organisations that you know — or different parts of the same organisation — as there may be sub-cultures within an organisation. Sometimes departments in different places have different cultures, while headquarters may have a different organisational culture from operational departments.)

Once again, don't forget Activity 1.10. How might organisational learning affect your decision making?

The implication of the above is that organisational culture may produce situations where poor decisions are made. This is clearly a possibility but it does not necessarily have to be the case. An example of a dysfunctional culture could be what Bohn (2000) refers to as a 'fire fighting' approach. This, as you might guess, occurs where there doesn't seem to be enough time to solve problems and, as a result, it becomes acceptable to make decisions which 'patch up' problems by providing a temporary fix. As a result, problems recur and, in fact, get worse.

Bohn argues that this approach can be countered by building what he calls a 'problem solving organisation'. This is one where the rules of thumb include things like 'don't reward fire fighting' and 'don't tolerate patches'. In these circumstances, therefore, organisational culture may contribute to good decision making.

Alternative approach 8: Garbage can model

This alternative returns to the idea that the logical framework of the rational model does not describe what actually happens in practice. It also brings together several of the ideas that have been discussed in the various alternatives to the rational model. It argues that many organisations are complex and that even those involved in them may not fully understand how all the various processes work and how they relate to each other. There is often a great deal of uncertainty and ambiguity in what happens in the organisation.

One way to understand the implications of this is to start by thinking of one problem requiring a decision. Possible solutions may be identified but before anything can be done, something else may happen. A new problem situation requiring a decision has arisen and nothing is done about the original decision. However, the solutions suggested for the original problem do not disappear and remain as possible courses of action which could be taken, although not perhaps for some time. The problem itself may also remain.

Another starting point could be a situation where some people are expecting a decision (eg at a committee). However, this is not taken because other things have happened. The expectations that a decision is needed remain, as do ideas about what a suitable decision should have been.

If you imagine that many situations like this are taking place at any one time, there will be a constant flow of solutions, problems and participants. They can be seen as flowing into a sort of organisational garbage can.

The garbage can model can be difficult to understand so don't worry if you are finding this hard going. The following activity may help you.

Activity 1.21: Your organisation and the garbage can



Think about your own organisation or an organisation that you know well.

Can you think of examples of the following:

- people who keep suggesting that a particular course of action should be followed and are seeking opportunities to get it put into practice — in other words a solution looking for a problem
- old ideas which have been suggested and never followed up but which still keep cropping up in discussions
- situations where a decision is required but it hasn't been taken for some reason or another — those affected are still expecting something to be done
- problems requiring decisions which keep getting postponed

As a result, at any one time an organisation has a garbage can filled with various solutions, possible choices, problems and so on. This means that decisions are not made following a logical process. Perhaps the best example is the solution looking for a problem. It may hang around for a while until a situation arises when those in favour of the solution see a chance to get it agreed. It may be that the solution is not suitable in this particular case but it could be. Those in favour of it may see it is as beneficial but they may have less laudable motives. It may, for instance, be an opportunity to get their own back on someone.

The main advantage of the garbage can model is that it reinforces the idea that decision making can be a messy and confused process. It is helpful to take this into account when thinking about our own approach to decision making.

Activity 1.22: Further research on the garbage can model



If you have found the garbage can model a little awkward to grasp, you may wish to find out some more about it. This may help you to understand its importance. You can try typing 'garbage can model' into any internet search engine.

However, a starting point could be wikipedia:

http://en.wikipedia.org/wiki/Garbage_Can_Model

Another option is

www.12manage.com/description_cohen_garbage_can_model.html

The garbage can model completes the alternatives to the rational model which will be looked at here. Remember that there are others which have not been considered. To conclude this section, it may be useful to return to the four main factors which influence the way the rational decision making model is used in practice and show how the various alternatives discussed above fit in with them.

In fact, none of the eight alternatives fits closely with socio-cultural factors. This helps to illustrate that some alternatives have not been considered. It also helps to show how the various factors overlap. The table below summarises the links between the four factors and the alternatives to the rational decision making model.

Process factors	Intuition Incrementalism Satisficing and bounded rationality Action rationality The Behavioural Theory of the Firm
Political factors	The Behavioural Theory of the Firm Power and politics
Organisational factors	The Behavioural Theory of the Firm Power and politics Organisational learning Garbage can model
Socio-cultural factors	None of the alternatives considered

1.5 Bringing it all together: your approach to decision making

At this stage, it may be helpful to reflect a little on what has been said so far. It should be clear that the rational decision making model represents a logical approach to decision making. In ideal circumstances, therefore, following the model should lead to good decisions. One example of this is where decisions can be programmed.

There are, though, a number of good reasons why decision makers will be unable to follow the rational model. At its very simplest, this may be because time pressures may prevent all steps of the process being followed. However, as the various alternatives to the rational decision making model show, the reasons for not following the rational model may be much more complex than just not having enough time. Some, such as bounded rationality, may be the consequence of the way in which human beings are able to process information.

The main conclusion from this, therefore, is that, in practice, for non-programmable decisions, decision makers are unlikely to follow the steps of the rational model precisely.

This, however, does not mean that they will necessarily make bad decisions. All it means is that the rational model is an ideal which is unlikely to be attainable except in the case of decisions which can be programmed. In other words, practical, everyday considerations influence how decisions are made and make it impossible to apply the perfect logic of the rational model.

The discussion in this Outcome in general, and this section in particular, are intended to help you understand what is happening when you make decisions and to assist you in working out how you approach decision making, confident that you can make effective decisions.

The theme of the Outcome is that the rational decision making model provides a framework for making decisions but it needs to be modified to take account of the socio-cultural factors, which means that it cannot be applied in its ideal form for non-routine decisions. If decision makers do this they will be able to make effective decisions.

It may be helpful, therefore, to summarise the various things that decision makers do in practice. These have been, of course, highlighted by the various alternatives to the rational model outlined in section 1.4:

- making use of intuition or gut feeling
- deciding what to do on the basis of what is done at the moment
- taking the decision once a satisfactory option has been found
- using ‘rules of thumb’
- taking decisions one at a time.

The alternatives to the rational model also illustrate that decision making does not necessarily consist of following a logical sequence. It can be a messy process where things are unclear and may be confused. It is not always the case, for example, that deciding what to do comes at the end of the process. As the garbage can model illustrates, there may be situations where a solution exists and a reason for making a decision is found afterwards.

Activity 1.23: Other things decision makers do



The above comments cover only some of the points raised in section 1.4 on alternatives to the rational model.

Are there any lessons which you think are important for decision making?

You may like to go back to your various responses to Activity 1.10.

Overall, therefore, the alternatives to the rational decision making model help to direct you towards the practical way of making decisions. However, the alternatives also point to some pitfalls which decision makers can encounter.

Activity 1.24: Pitfalls for decision makers



What kind of pitfalls for decision makers do you think are suggested by the alternatives to the rational decision making model?

You may find it helpful to skim through section 1.4 to remind yourselves of some of the possibilities.

Many of these dangers can be avoided by remembering the steps of the rational model. It is, as has been shown, unlikely that a lot of options will be identified but it may be possible to check whether those which have are valid, even if there is only one. Essentially, this means quickly going through the steps of the rational model. As Gladwell (2005) says, people can learn to do this very quickly because their experience and expertise enables them to home in on key factors. Table B gives some of the types of questions you could use to help you avoid the main pitfalls of decision making.

Table B

Stage in the rational model	Questions to ask
<p>Define and clarify the situation in which a decision is required</p>	<ul style="list-style-type: none"> • Have I got a sufficiently clear idea of the situation requiring a decision? • Is there anything that I need that will help me clarify the situation further? • Have I got enough information to make a decision? • Is the information I have as accurate as possible? • Are we addressing the right problem? • Do we have to make a decision now?
<p>Identify alternative options gather information about them</p>	<ul style="list-style-type: none"> • Are the available options (or option if there is only one) acceptable? • Do I know the consequences of the available option(s)? • Is the information available accurate? If it isn't, why is this the case? • Are there any valid options which have not been considered and which should be looked at? • Are any options based on optimistic forecasts? • Has any important information been left out?

Table B continued

Stage in the rational model	Questions to ask
Compare each option against pre-determined criteria	<ul style="list-style-type: none"> • Is the available information as complete and accurate as possible? • Are some people biased towards a particular solution?
Select the best option	<ul style="list-style-type: none"> • Am I biased in favour of a particular option? • Is my choice being influenced by others for their own benefit? • Is the 'rule of thumb' suitable in this case?
Implement the chosen option	<ul style="list-style-type: none"> • Are there the resources needed to implement the decision properly? • Can anyone frustrate the decision?

Outcome 2 will look at these various stages and consider techniques that you can use to help you avoid the pitfalls of decision making but also take account of the difficulties of applying the rational model.

However, before moving on to Outcome 2, there is one final aspect of analysing models of decision making. This is about how decisions are made in groups.

1.6 Group decision making

So far the discussion has concentrated on decision making by individuals. Decision making does not, of course, take place in isolation. The alternatives to the rational model showed that politics within organisations can influence how decision makers operate. Decisions can also be affected by the wider organisational context such as what has happened in the past, as well as by factors which affect the whole society within which organisations operate.

Groups can also affect the way decisions are made. There are two aspects to this. Firstly, managers often have to take decisions which affect the team or group for which they are responsible. In these circumstances, it may be wise to consult with members of the team about what should be done. Secondly, decisions may be made by a group of people working together who have a shared responsibility to decide what to do in a particular situation.

In both cases, but particularly the second one, group dynamics may influence how the decision is made. Group dynamics refers to the various ways in which members of the team or group interact with each other. Group dynamics can, in fact, be considered another factor which may affect the way in which the rational decision making model is applied. It could be added to the four which were considered in the section 1.4.

Activity 1.25: Group decisions



Each of the two aspects above will be looked at in turn. However, before going on to this, think about groups you have been in and decisions which have been made.

Can you think of an example of each of the two situations mentioned above?

Vroom and Yetton's consultation model

This concentrates on the first of the two situations mentioned above — in what circumstances should managers consult with members of their team when making a decision.

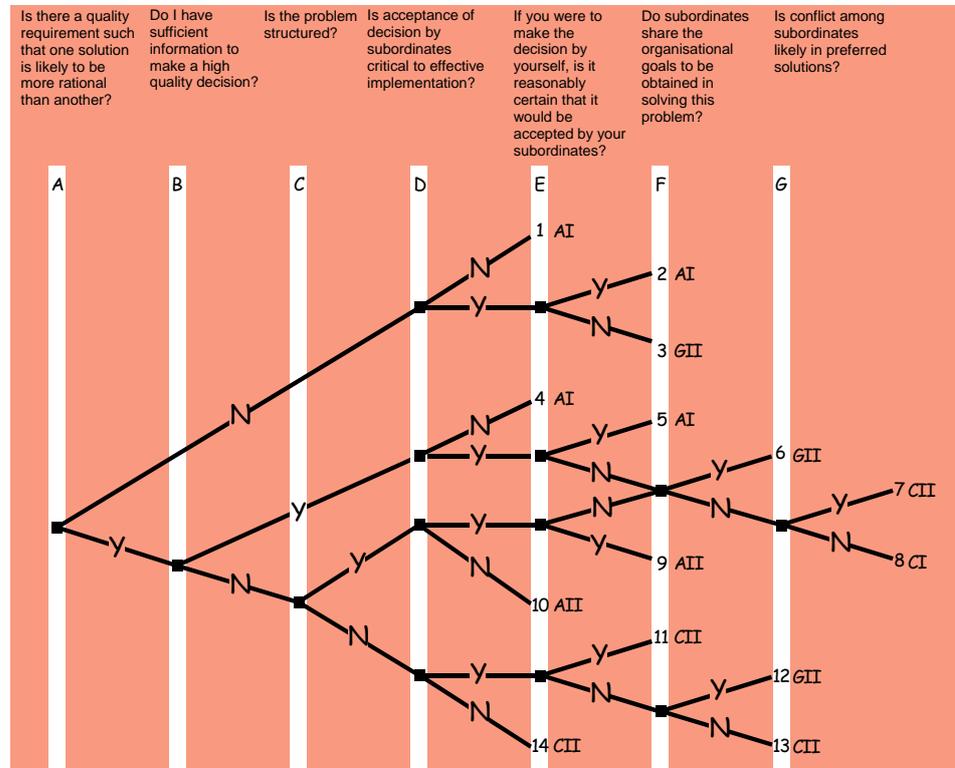
This approach is based on the idea that a sound decision has three attributes:

(1) quality of the decision — if the situation is such that one decision is likely to be better than others, it is important to gather as much information as possible; in this case it is important to consult with team members as part of the information gathering process

(2) acceptance of the decision — some decisions will require strong commitment from team members if the decision is to be implemented successfully; in these cases, consultation with team members is likely to be needed

(3) amount of time taken — where two decisions may be equally effective, the one that takes less time should be chosen.

The way the model works can be explained with reference to the diagram below.



When to consult (adapted from Vroom and Yetton, 1973)

The diagram is an example of what is known as a ‘decision tree’, something which will be considered further in Outcome 2. It is designed to be read from left to right. You can begin by looking at the question at the top. The first question — at the top of the column labelled ‘A’ — asks: ‘Is there a quality requirement such that one solution is likely to be more rational than another?’

If the answer is ‘Yes’, decision makers follow the ‘Y’ to column ‘B’ and ask the question at the top of this column. If the answer is ‘No’, decision makers move to column D and progress from there.

As you can see from looking at the diagram, the result is a number of routes for decision makers which, depending on the circumstances surrounding the decision, will provide advice on when to consult with team members. The routes have various titles, eg AI, GII, each of which represents a decision process. You will see that some routes involve the same decision process.

These processes can be described as follows:

AI	The team leader makes the decision by her or himself using whatever information s/he has available.
AII	The team leader obtains information from team members but makes the decision by her or himself. Team members provide information and may not be aware of what decision is required.
CI	The team leader shares the issue with team members without bringing them together as a team. The team leader then makes the decision by her or himself.
CII	The team leader shares the issue with team members as a team and collects their information and suggestions. The team leader then makes the decision by her or himself.
GII	The team leader shares the issue with team members as a team. The team consider and evaluate alternatives and agree on a consensus decision. The team leader acts as a facilitator or chairperson and accepts whatever decision is reached.

AI and AII are described as autocratic decision making processes; CI and CII are consultative processes and GII is a group process. All five processes assume that the rational decision making model will be used.

Vroom's model is useful because it extends the rational model into a team or group context. The diagram above provides a kind of checklist which team leaders can use to help them choose a suitable approach to making decisions for their team.

Activity 1.26: Applying Vroom's model



Look at Table B above which gives the decision making processes.

Pick one or two of the five possibilities and follow them through in the diagram. You may find it easier to start at the right of the diagram and follow the approach backwards to the left. You can then move along the sequence from left to right and think about the various decisions involved in the process.

Now think of an example in your experience of where one of the approaches you have chosen was used.

Compare it with the diagram and think whether or not the approach was suitable. Did it result in a good decision?

Groupthink

The second aspect of group decision making is where a team make a shared decision. This, in fact, is the situation which Vroom describes as GII. The idea of groupthink was first noted by Irving Janis (1977) and has been widely used to highlight some of the potential problems of group decision making and also of the possible dangers of not following the steps of the rational model.

Janis based his ideas on a study of the decision behind the disastrous invasion of the Bay of Pigs in Cuba by a United States sponsored force in 1961. The US government decided to assist and support an invasion by Cuban exiles opposed to President Castro, who had recently assumed power in Cuba. Nothing went according to plan. Two of the four supply ships were sunk by Cuban forces and the other two fled as a result. The invading troops were immediately surrounded and, within three days, the whole operation had been quashed.

The affair was a considerable embarrassment to the newly installed administration led by President John F Kennedy. The decision was made by a group consisting of President Kennedy and his most senior advisers. It consisted of some of the best minds in the United States. The question which Janis asked, therefore, was why such an intelligent and capable group of people could come to such a poor decision.

His answer was that the group suffered from 'groupthink'. This is a phenomenon where the need to maintain harmony and consensus among members of the group becomes all important. Consequently, members of the group suppress anything which

may cause conflict within the group. They do not, for example, engage in any realistic appraisal of possible alternatives nor do they consider information which may be contrary to what the group would like to see. The group, therefore, develop a single minded approach which does not take into account significant factors relevant to the decision. This blindness inevitably leads to a poor decision.

Janis identifies a number of symptoms of group think. They include the following.

- Illusion of invulnerability — groups become very cohesive and this makes them over-optimistic about what will happen.
- Illusion of unanimity — group members come to believe that because they all agree on something it must be true; this enables them to explain away any contradictory evidence, for example.
- Suppression of personal doubts — group members do not voice any doubts for fear of being seen as ‘soft’ or ‘not being on board’; the tendency to do this is often increased by social pressure exerted by some group members on anyone who does express any doubts (Janis refers to such people as ‘self appointed mindguards’).
- Stereotyping — group members develop unfavourable stereotypes of the perceived enemies of the group; these stereotypes can, for example, prevent the group from carefully considering what the consequences of the decision might be.

Activity 1.27: My experience of groupthink



Can you think of a situation where a group may have suffered from groupthink? It may be a situation where you were a member of the group or one where you have been affected by the decision.

With hindsight, why do you think groupthink occurred?

1.7 Some closing comments

In many ways, groupthink is an appropriate idea with which to close this first Outcome on models of decision making. It has covered a lot of ground and raised a lot of issues. A key underlying point throughout is that good decisions depend on having a sound process for decision making. Groupthink illustrates that an inadequate process can lead to a poor decision.

It does not necessarily follow that a sound approach to decision making will lead to better decisions. However, the other main underlying point in this Outcome is that a good process will increase the chances of making a good decision. Conversely, an unsound process is more likely to result in poor decision making.

It may be helpful to summarise critical points from Outcome 1 once again. They are as follows.

- A decision is a commitment to a course of action.
- The rational decision making model provides a framework for making decisions.
- Routine decisions can be distinguished from non-routine decisions. The latter, known as programmed decisions, can be made using an established process based directly on the rational model.
- The rational decision making model can be seen as an ideal and it is not possible to follow the steps of the rational model exactly for non-routine decisions.
- The alternatives to the rational decision making model explain some of the more realistic ways in which decisions may be made.
- However, the alternatives also point to some of the pitfalls which decision makers may encounter and which may lead them to make bad decisions.

Overall, therefore, the chances of making good decisions are likely to be greater if the broad framework suggested by the rational model is followed.

It is also possible to develop an approach to decision making which recognises that it is not possible to follow the steps of the rational decision making model exactly. This approach can also take account of the pitfalls that not following the model may bring.

Outcome 2 goes on to look at how you can use the foundation established in Outcome 1 to develop your own approach to decision making. It looks at various techniques which decision makers can use to help them enhance their decision making. All are built around various parts of the rational model and designed to help decision makers avoid its pitfalls but, at the same time, operate in a realistic and practical manner.

One possible way to consider your own approach to decision making may be to think about decision making as a process of inquiry. This would allow you to take account of the steps of the rational model but would also allow you to act in a realistic and practical manner. For example, when a workable option is identified, there may be no need to look any further.

Garvin and Roberto (2001) contrast the inquiry approach with what they term the advocacy approach in which decision makers argue for their preferred solution. In their view, this encourages decision makers to neglect vital parts of the rational decision making model and, therefore, make poorer decisions than would otherwise be the case.

Study Notes for Outcome 2

Developing an approach to decision making

Introduction

These study notes cover Outcome 2, 'Develop an approach to making decisions'.

Outcome 1 considered different models of decision making and the rational decision making model in particular. You will remember that the main message was that the rational decision making model represents a sound framework for decision making.

However, there are good reasons to believe that it is not possible, especially for non-routine decisions, to follow the rational model exactly. This has led to the development of a number of alternative models of decision making, most of which attempt to present a more realistic approach to the way decision makers actually operate.

These models also highlight some of the traps that decision makers can fall into and which may lead them to make poor decisions. For example, they may, on the basis of past experience, fail to take into account changes between the current and previous situation. Perhaps, also, they may not gather sufficient information and, for this reason, take an over optimistic view of the consequences of a decision.

Overall, Outcome 1 encouraged you to develop a decision making approach which uses the framework of the rational model but also recognises that, in its pure form, the model cannot be followed exactly. Outcome 2 takes this forward and considers some methods and techniques which decision makers can use to help them make more effective decisions.

The main purpose of Outcome 2, therefore, is to give you ideas which may help you in developing your own approach to decision making. Outcome 3 completes the cycle by looking at how you can evaluate the decision making process. By doing this you can further improve your approach to decision making by reviewing decisions you have made and learning from them.

This structure of the text follows the rational decision making model. This is deliberate because it helps to reinforce the theme that the rational model provides a framework for a valid and workable approach to decision making.

For each stage of the rational model some methods and techniques which you can use will be discussed. Table 2A on the next page summarises the ones that will be considered. They are

only some of the ones available. You may have already had experience of some of them and you may well be familiar with others which do not appear. You may find that some suit you better than others. This is to be expected.

The best approach, therefore, is to consider the various methods and techniques and decide which ones are most likely to help you and in which circumstances. You may find that some are more appropriate in some situations than in others. Building a repertoire of methods and techniques which you can draw on when required can help you to develop a flexible and adaptive approach to decision making.

Table 2A

Stage in the rational model	Methods/Techniques
Define and clarify the situation in which a decision is required	Soft systems approach Why-Why Fishbone diagram
Identify alternative options and gather information about them	Boardblasting (Thought showering) Lateral thinking Morphological analysis
Compare each option against pre-determined criteria	How-how Evaluation matrix
Select the best option	How-how Evaluation matrix
Implement the chosen option	SMART objectives Planning Stakeholder diagram

This Outcome ends with a section on two decision making techniques which apply to the process of decision making as a whole. They are decision trees and cost benefit analysis.

Activity 2.1: Methods and techniques of decision making



Before starting on the main sections of this Outcome, look at Table 2A.

Are there any techniques/methods that you recognise? In what situations have you come across them before?

2.1 Defining and diagnosing the problem/issue

This is the first stage of the rational model, ie define and clarify the situation in which a decision is required. There are many techniques designed to help decision makers clarify the situation in which a decision is required. This section will look at three of those available: soft-systems method, why-why and a fishbone diagram.

All of them have the same aim, which is to try to ensure that a decision is made about the right thing. The main message from them is that it is easy to overlook important points or reach a conclusion about something too quickly. The result is that a decision is made but the action which follows does not result in a suitable outcome.

Section 1.1 considered the difference between decision making and problem solving. You may remember that the two are very closely connected and that the rational decision model can be applied to solving problems. This is because once a problem has been recognised it is necessary to make a decision or decisions so that action can be taken to address the problem. The three techniques considered here, therefore, can be seen as problem solving as well as decision making techniques.

Soft systems method (SSM)

Often referred to as SSM, this approach was developed as a way of tackling complex and inter-related problems. As its name suggests, it is based on the systems approach. This means that it takes the view that all the various factors in a situation are connected to each other. It aims, therefore, to identify the connections between these factors and also the nature of the

interactions between them. It is referred to as 'soft systems' because it takes into account the impact of qualitative factors (eg how those involved feel about things; how those involved use power). This means that connections between various parts of the system may not always be hard and fast.

SSM begins with a detailed observation of a situation where a problem or problems are occurring. This should be done with an open mind so that jumping to conclusions is avoided. This opening stage includes collecting information on the situation. While much of this may be qualitative, quantitative data may also be valuable. For example, one dimension of the situation may be that output is below the levels required or that costs are above budgeted figures.

From this observation, the situation can be described in detail. This can be done pictorially in what is known as a 'rich picture'. In many respects this is similar to a mind map as it contains all relevant factors in the situation but does not attempt at this point to link them together.

This rich picture can then be used to construct what SSM describes as a 'root definition'. This is a verbal statement, or definition, which describes the system which seems to apply in this situation. It covers the inputs to the system how they are used, or transformed, and the outputs from the system. It can also cover the main groups involved in the situation and how each contributes to it.

Activity 2.2: Using SSM to describe a situation



The above may seem a bit complicated. In fact, what it is trying to do is to look at a situation afresh in the hope that this will bring new insights. For this reason, it is often used by outsiders to a problem.

Think of a situation you know which you would describe as a 'problem situation'.

Now try to look at it in as unbiased a way as possible. Try to identify all the factors, including groups and individuals, who are involved in it. Write down, in any order, all the things that you can think of. Make sure that you include qualitative factors, eg group X and Y do not like each other; Z throws his weight about to get his own way; W uses her contacts elsewhere to try to influence what is happening.

Try, if you can, to represent this pictorially. If you can this will be a rich picture.

From your picture, write a brief description of what you think is happening — this will be your root definition. The important thing is to base it on your rich picture and not to think about any pre-conceptions you might have had.

The root definition can now be used to identify exactly how the system in the problem situation works in practice and what the inter-connections are between the various parts of it. At this point it should be possible to see more clearly what the problem is and what decision may need to be made.

The above may seem to be obvious and much more elaborate than is necessary. It may also seem to be very time consuming. These are valid points but the soft systems method does have significant lessons for decision making. It is designed to address difficult and complex situations where it is not easy to disentangle what is going on. This is why SSM tries to adopt a methodology which can help decision makers look at a complicated and difficult situation in a new light. It does this by going back to first principles. In this way, it helps decision maker to explain a familiar situation as though it were a new one. In this way, it can help decision makers become 'unstuck'. It can, therefore, be particularly useful in situations where decisions have been made but have not proved to be successful in resolving matters satisfactorily.

The message from SSM is that it is possible to look at a situation afresh even though it may be necessary to break down some pre-conceptions before you can do this. If you are faced with having to decide what to do in a complex situation it may help you to work out what is actually going on. Even if you never use the ideas contained in it, you may find it helpful to remember that there are situations where it can be useful to look carefully at the whole situation before deciding what to do.

Activity 2.3: Mind maps



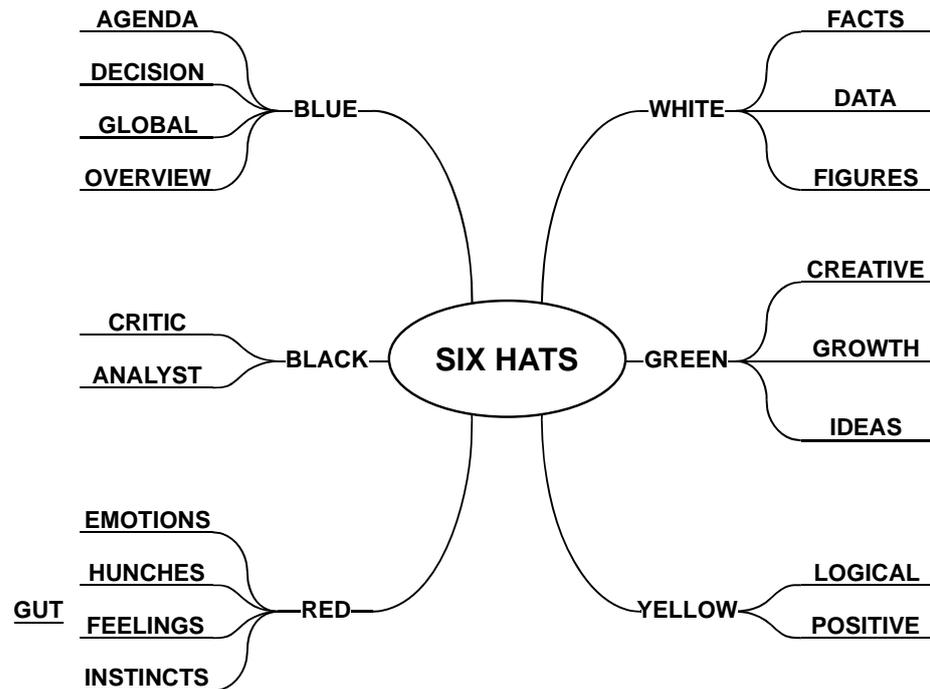
The SSM and rich pictures in particular have much in common with mind maps.

If you've not come across these before (or even if you have) you may find them a useful technique.

Mind maps were devised by Tony Buzan, who has written several books on them. You can also get software to help you draw them.

Try looking up Tony Buzan's website at www.mind-mapping.co.uk. It has examples of mind maps and some advice on how to draw them.

It is not the purpose of this material to look at mind maps in any detail but the illustration which follows is a mind map which illustrates Edward de Bono's (1990) six thinking hats. This particular example has been chosen to introduce the work of de Bono whose ideas on lateral thinking will be discussed in the next section.



Summary of Edward de Bono's Six Thinking Hats

Activity 2.4: Thinking about thinking



Look at the mind map above. It shows six different ways of thinking. De Bono (1990) argues that by thinking about things in different ways we can become more effective at a range of tasks including problem solving and decision making.

What do you think of the mind map?

Why-why

This is another method that can be used to help define and clarify the issue about which decision has to be made. It is the second of the three that will be dealt with in this section.

As its name suggests, 'why-why' consists of looking at the issue and asking the question why repeatedly. Eventually, things will reach a stage where the question 'why?' cannot be answered. It is then safe to assume that the fundamental issues have been identified. The situation, therefore, has been defined and clarified and it should now be possible to work out which decision or decisions need to be made.

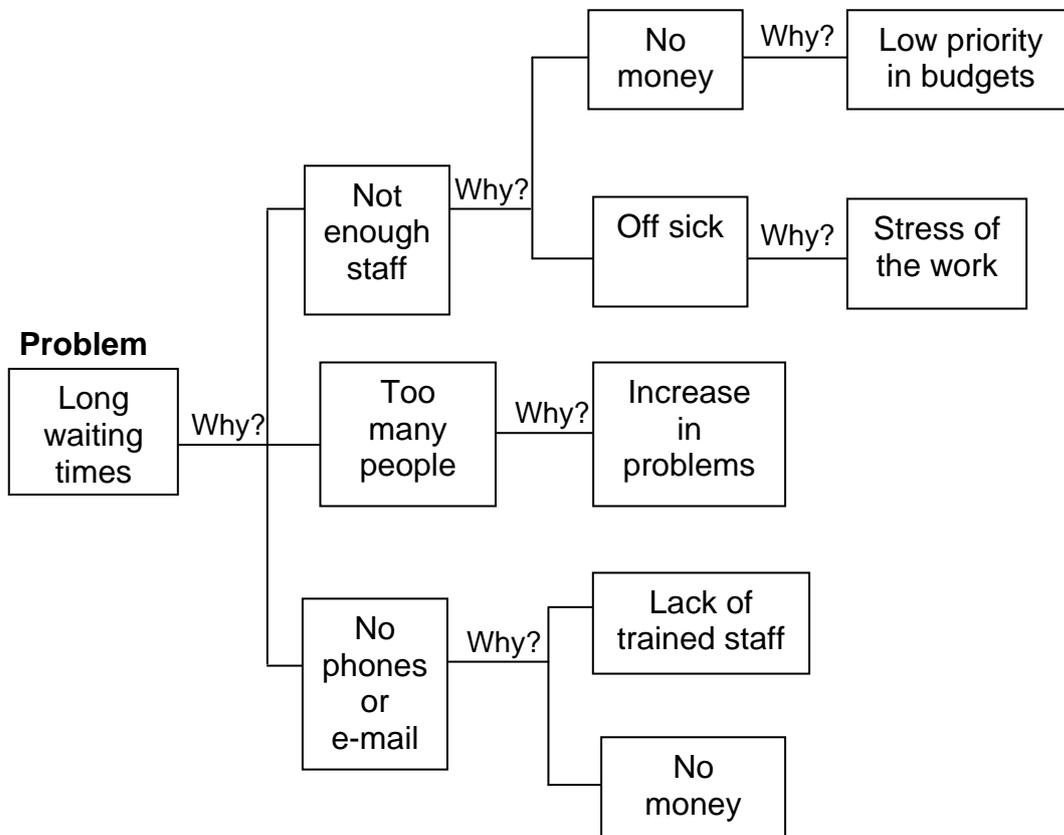
Why-why can involve collecting a lot of information and in this sense it is similar to the soft systems method. However, the recoding of why-why is different. It is usually done by developing a

diagram. The problem is written on the left hand side of a piece of paper and the answers recorded in boxes to the right.

Suppose in this case the problem is long waiting times at a reception desk. This is shown in the diagram on the next page at the left hand side. You will see that after this is written ‘Why?’ and the next three boxes to the right give possible reasons for the long waiting times. One, for example, is ‘too many people’ — the reception desk is busy because a lot of people are coming to it. This, in turn, may be because there has been an increase in the problems they face. Again, there may be reasons for this but they are not shown on the diagram.

The diagram is, therefore, only a partial diagram and it is likely that a number of other boxes will have to be added before it fully covers all aspects of the issue. It is still possible to keep asking ‘why?’ This means that the root causes of the problem have not yet been identified.

You will see that the diagram has three branches representing different strands of the issue. This helps to make the diagram tidy and easy to follow. However, it is not something that happens immediately. It evolves from repeatedly asking the question ‘why?’ As this is done, patterns begin to emerge. Hence, despite the fact that it is not finished, the diagram is actually the result of quite a lot of questioning.



Why-why often involves drawing quite a number of diagrams like the above, each of which contains more detail than its predecessors. Each successive diagram can help to get closer to the core of the problem and therefore make it easier to see what decision or decisions are required. In the above case, for example, the reason 'no money' appears in two different strands. This could give a clue to the root cause of the difficulty. It may be that this particular issue requires a decision about budget priorities. This, in turn, may require other decisions, eg on ICT training and equipment.

Activity 2.5: Using why-why



Can you think of a situation where why-why would be helpful to you in defining and clarifying when a decision needs to be made?

If you can, could you begin to draw a why-why diagram?

In many ways why-why is like the soft systems method in that it demonstrates the importance of looking carefully at a situation to try to work out what factors are important. Only then, can a decision or decisions be made. Like SSM, it draws attention to the fact that in complex situations making a hasty decision may not always produce the best results.

Fishbone diagram

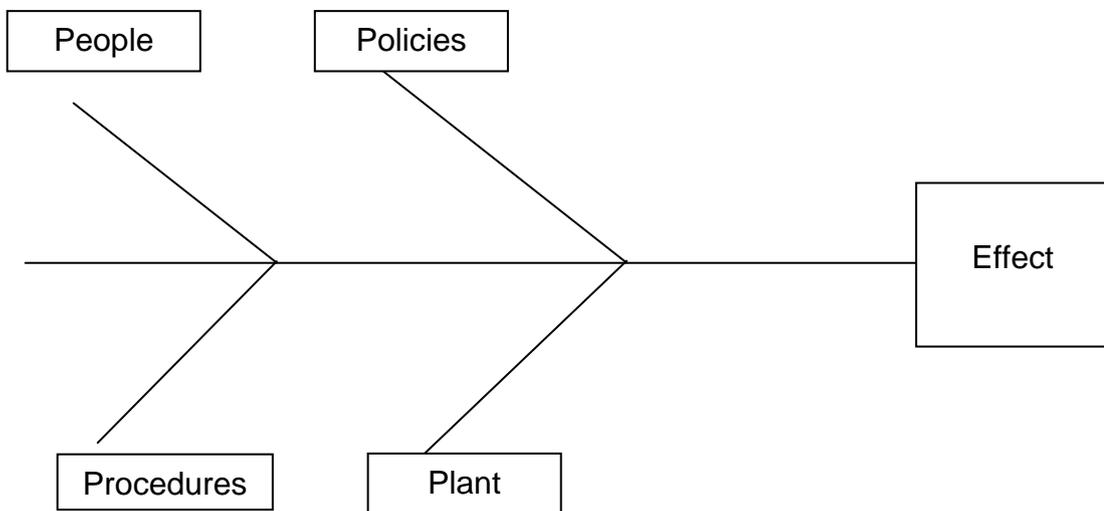
This is similar to the why-why approach in that it uses a diagram which tries to set out the reasons behind a particular situation. Like the other two techniques in this section its aim is to identify the various factors which contribute to a problem. In this way, it helps to define and clarify what decision or decisions need to be made.

The emphasis in a fishbone diagram is on cause and effect. The problem situation is seen as the effect and the factors which contribute to it are causes. The question to ask here is 'what factors have caused the effect?' Again the situation can be represented diagrammatically — in this case by a diagram which looks like a fishbone. This, of course, is how this approach gets its name.

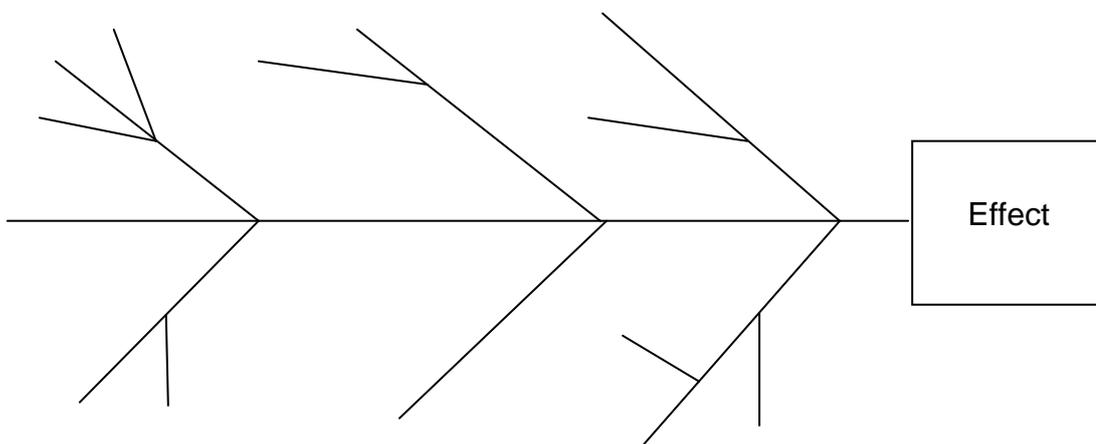
This technique is built around constructing a diagram. In this sense, it differs from the why-why approach where the diagram is a way of portraying the responses to the 'why' questions in a way that makes the situation easier to understand.

The starting point for a fishbone diagram is to put the effect at the right hand side of the diagram (if you wish you can put it at the left hand side). A vertical line, known as the spine, can then be drawn to the effect. The causes can then be shown like the bones of a fish leading away from the spine.

In this example, the causes are labelled as 4Ps — people, procedures, policies and plant (or equipment). These are general headings which can be used to help identify specific causes. Actual examples of fishbone diagrams would specify the actual causes. General headings like those given can, however, provide a framework which decision makers can use to help them identify all the various causes.



The basic fishbone diagram given above can be extended to cover as many causes as there are. The main 'bones' from the spine represent major causes while subsidiary causes can be shown by other bones coming from the main ones. The diagram below shows a template of an extended version.



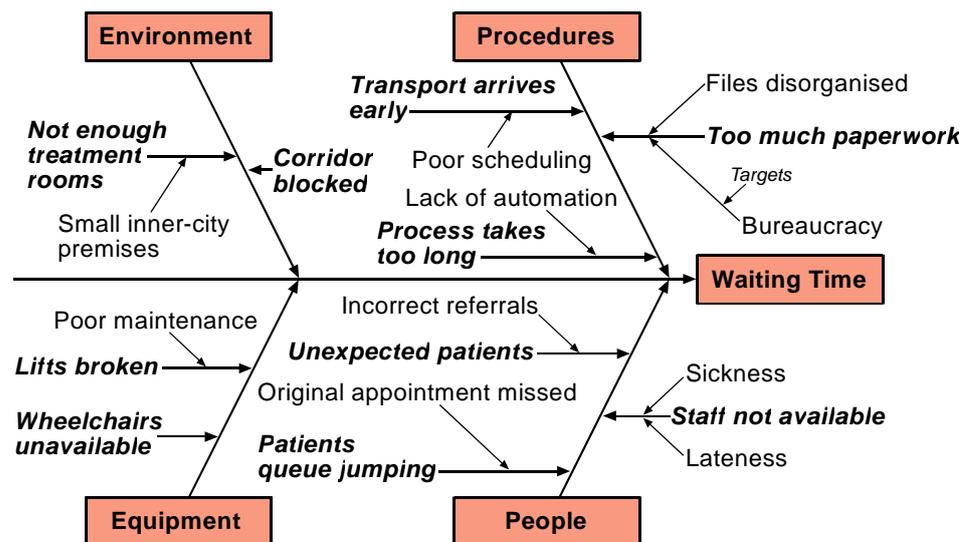
Activity 2.6: Drawing a fishbone



Can you think of a situation where drawing a fishbone could help you to define and clarify when a decision needs to be made? It could be the same as the one you used for your why-why diagram.

If you can, try drawing a fishbone diagram. There is an example on the next page which may help you.

The diagram below is an example from the National Health Service about waiting times. It illustrates that the main causes can be labelled in different ways. It comes from www.tin.nhs.uk/index.asp?pgid=1132. This site also contains advice on how to draw a fishbone.



The three techniques discussed in this Outcome have much in common. All seek ways of looking at a situation more closely to try to identify the main factors which affect what is going on. In this sense, all have the same message for making decisions. It is to make sure that you know what the situation is before deciding what to do. Why-why and the fishbone diagram probably have greater applicability than the soft system method and both can be used to structure a group discussion on a difficult situation where a decision or decisions are required. The merit of the soft systems method is that it can be applied to particularly complex and difficult situations where it is necessary to try to look at a familiar situation with new eyes.

2.2 Generating alternative solutions

This is the second stage of the rational model. You'll remember that this is 'identify alternative options and gather information about them'. You may also remember that section 1.4 pointed out that, in practice, many decision makers do not explore a range of options. Often, as alternatives like 'incrementalism' and 'action rationality' showed, this is for good reasons. Decision makers may also, for example, stick with options that have worked well in the past.

Approaching decision making in this way does not necessarily lead to bad decisions. However, in some situations, it could have some drawbacks. It may, for example, mean that good options are not taken because they are not considered. It could also lead to decision makers sticking with an option which may no longer be appropriate, even though it has proved effective in the past.

One of the reasons why decision makers may not look at a range of options is that it is not always easy to think of suitable options. One reason for this is that we are conditioned not to think 'outside the box'. Some writers argue that the rational decision making model itself discourages creative ideas because it takes a linear approach to decision making.

This section looks at some ways of stimulating creative thinking. There are many of these but three will be considered here. They are boardblasting, lateral thinking and morphological analysis. All are designed to try to help decision makers think creatively about the situations which they face. This may help them to commit to a novel course of action. This may be particularly useful to tackle situations which have proved difficult to resolve in the past. It may also help in situations of change where new ways to address situations may be required.

All these techniques are most suitable for more complex situations where defining and clarifying the situation may not be straightforward. In other words, the techniques discussed in this section follow on from the ideas outlined in section 2.1 above.

Activity 2.7: Thinking of creative solutions



Before we look at the three techniques, it may be useful to think about your own experience of trying to think of a new way to do something.

Can you think of a situation where a new approach would be helpful but it has proved difficult to think of one? Why has this been the case?

Boardblasting (Thought showering)

Boardblasting is a well-known technique which you may well have come across before. It is also known as thought showering.

Boardblasting can take a number of formats but the basic idea is to separate the processes of generating ideas and evaluating them. This is because commenting on ideas shifts attention away from thinking of something new as well as inhibiting new suggestions, especially if the comments on them are critical. Boardblasting attempts to overcome these difficulties by creating an environment which promotes new suggestions. Evaluation of ideas can only begin when all new suggestions are completely exhausted.

The basic rules of boardblasting are:

- no criticism or comment — all judgements on suggestions should be suspended
- all ideas are OK — even ones which seem entirely ‘off the wall’
- building or ‘hitch hiking’ on the ideas of others is to be encouraged
- quantity is vital — the aim is to get as many ideas as possible.

One possible sequence for boardblasting is as follows:

- 1 Define the problem and state it in a suitable format. This usually involves the word ‘how’. For example, ‘How can waiting times at the reception desk be reduced?’ or ‘How many ways can we communicate with members of the public?’.
- 2 Assemble a group of 6–15 people (12 is often considered the best number) all of whom have relevant expertise and knowledge of the situation but come to it with different perspectives.
- 3 Remind participants of the rules of boardblasting.
- 4 Carry out a brief ‘warm-up’ to help people get into a thinking mode, eg ‘How many uses are there for a shoe?’.
- 5 Write down the ideas as they are suggested.

This basic sequence can be modified in a number of ways. Some people prefer that the group begins by developing a suitable statement of the situation. In some cases, one group member writes down all the ideas. In others, group members write down their own suggestions. Post-it notes can be used to write down ideas.

Boardblasting sessions usually last about 15–40 minutes. During that time it is important to stop participants commenting on ideas and to concentrate on getting as many ideas as possible — even if some are so ‘wild’ that they could never be implemented. It doesn’t

matter if ideas are suggested more than once — all suggestions should be written down.

The outcome of a successful boardblasting session should be a list of possible suggestions to resolve a situation. These, of course, represent possible decisions which could be made. The list, or more likely lists, may well be untidy or there may be a vast number of post-it notes.

These lists can then be ordered and evaluated. This can be done as part of the boardblasting meeting (perhaps after a break) or at a subsequent session. The techniques in section 2.1, especially the fishbone diagram, can be used to organise the various suggestions into a coherent form. The next section will look at ways in which the results of a boardblasting session can be evaluated.

The usual method is for a sub-group (of about 3–5 people) to undertake the sorting of ideas and the evaluation. This sub-group presents their conclusions to the full boardblasting group, which decides what course of action should be adopted (ie what decision or decisions should be made).

Activity 2.8: The benefits of boardblasting



What do you think are the benefits of boardblasting?

Do you think it could be helpful in your own situation — or in ones that you may meet in the future?

Lateral thinking

The term 'lateral thinking' was first used by Edward de Bono (1990). He contrasted it with normal thinking which he referred to as 'vertical thinking'. The table following shows some of the contrasts between the two types.

Vertical thinking . . .	Lateral thinking . . .
seeks judgment	seeks changes
looks for yes/no answers	looks for differences
uses information to analyse what works and what does not	uses information to provoke new ideas
proceeds in logical steps	uses intuitive leaps
focuses on what is relevant	welcomes distraction
closed: promises at least one outcome	open ended: no promise of a result

Vertical thinking, for example, goes from A to B to C whereas lateral thinking can go from A to C or to Z or to 2 or 20. Starting at A, vertical thinking will reach C but lateral thinking could end up anywhere.

The rational decision making model is an example of vertical thinking. To this extent, as the above section on boardblasting showed, it can inhibit the process of getting new ideas.

Activity 2.9: Illustrations of lateral thinking



Lateral thinking is often illustrated with statements like the following:

Jane walked into a bar and was immediately knocked unconscious. How could this happen?

Sometimes it involves sequences:

J F M A M _ _ (What are the next two letters?)

You may know of some other similar examples.

The above activity involves challenging assumptions, which is one of a number of lateral thinking techniques. Another is the reversal method, which involves reversing the situation and considering what might happen then. A well know example involves the problem ‘how can I lose weight?’ Reversal would involve asking ‘how can I put on weight’. Considering this may offer insights into the decisions needed to address the actual situation.

Boardblasting is another example of a lateral thinking technique. There are a number of other lateral thinking techniques which you may have identified from Activity 2.9.

As you will have gathered, lateral thinking is a way of extending the rational decision making model to help you to make decisions which will provide new ways of tackling difficult situations. Like the techniques in section 2.1, it also helps to guard against decision making pitfalls such as making over hasty assumptions, not thinking things through or doing something just because it worked well last time.

Morphological analysis

This technique has a rather off-putting name but is actually quite simple. It was originally developed as a way of generating ideas for new products but can readily be applied to more general problems. It involves combining the apparently unrelated attributes of a problem.

The first stage is to state the problem. In its original form this would be a new product, eg how to keep dry in the rain, but in other contexts it could be ‘how to eat more healthily’ or the one used before of ‘how to reduce waiting times’.

The next step is to identify the attributes of the product. In the case of healthy eating, two possible attributes could be when food is eaten and what food is eaten. There may, of course, be more — such as where food is eaten. Once relevant attributes have been identified then various aspects of these attributes can be identified, for example, when food is eaten may be breakfast, lunch, at coffee break and so on.

There is no limit to the number of attributes or the various aspects of each attribute. However, for two attributes it is possible to produce a two-dimensional table to illustrate them.

Attribute 2	Breakfast				
	Coffee time				
	Lunch				
	Snack				
	Evening Meal				
		Apples	Chicken	Broccoli	Fruit juice
Attribute 1					

Each of the cells represents a possible combination of attributes. It is possible that some of the combinations may yield fresh insights. For example, drinking fruit juice at coffee time may be one decision that could contribute to healthy eating.

It is possible to illustrate three attributes on a three-dimensional diagram but if there are more than three it becomes necessary to list them. This has the disadvantage that it is less easy to see the various alternatives at a glance. However, the more attributes and the more aspects of each attribute, the greater the number of possible options.

This can be shown by an example from Whetton and Cameron (1991). This is a simple problem of an administrator who takes long lunch breaks in a café with his friends. The dimensions of the problem are the length of the break, when it starts, where it is, who with and how often.

Various aspects of each attribute can be listed in a table like the following:

Length of break	When it starts	Where it is	Who with	How often
60 minutes	11.45 am	Café	Friends	Every day
20 minutes	12 noon	Work rest area	Colleagues	Once a week
35 minutes	12.30 pm	Office	Boss	Every other day
45 minutes	12.45 pm	Conference room	Other employees	Once a month
90 minutes	1.00 pm	Employee eating area	Management team	Once a fortnight

The table does not show the various boxes into which possible options may fall but it does give a wide range of possibilities, eg one solution may be a 20 minute break once a week with members of the management team in the conference room. Clearly, it is possible to increase both the number of attributes and the number of aspects within each attribute. Whetton and Cameron (1991) concede that this is a simple example but it does give a good illustration of how the technique can be used.

This technique, like brainstorming, may well produce options which do not warrant serious consideration but it may lead to some new thoughts and raise possibilities which would otherwise not have been thought of.

Activity 2.10: My own morphological analysis



Can you devise a table like the one above for a situation that you are familiar with? It should be a situation in which you are involved or which you know of.

Possible attributes might be who could be involved in a resolution of the situation, what equipment might be involved, when things could be done, what actions could be undertaken and so on.

2.3 Deciding between alternatives

This section relates to the third and fourth stages of the rational decision making model. They are ‘compare each option against pre-determined criteria’ and ‘select the best option’. Together, these stages enable decision makers to choose between the various options which are open to them — and which, perhaps, have been generated by the kind of creative thinking techniques discussed in the previous section.

A number of techniques and approaches have been suggested to help decision makers weigh up the alternative courses of action available to them. This section will concentrate on one of these — the evaluation matrix.

It also looks at the how-how technique which can be used for deciding between alternatives but is, perhaps, more suited to the implementation of a decision.

Evaluation matrix

This involves a direct comparison of the various options against the pre-determined criteria. It is usually done by summarising the information in a diagram and, for this reason, can also be called a selection grid.

The table below shows a typical matrix. The options are listed down the left hand side and the decision criteria along the top.

	Decision criteria					
Options	1	2	3	4	5	Total
A						
B						
C						
D						
E						

Each option is then considered against each of the decision criteria and given points on a scale, usually of 1–5. An option which meets a criterion as well as possible scores 5, while one which does not meet it at all well is given a score of 1.

Once this procedure has been done for each option, the points can be added up. The option with the highest score is taken to be the preferred option.

Activity 2.11: Trying out the evaluation matrix



You can try to work out an evaluation matrix for yourself. The easiest way to do this is to imagine a personal decision you have to make where you have a number of options. Possible situations are deciding where to go on holiday, which new car to buy, where to buy a new house and so on.

Choose one situation like this and think of the criteria you might use, eg a car may have to be economical, it may have to have room for children or pets, it may have to be in a particular price range and so on.

You can then think of various options available to you, eg different makes of car or different types such as family saloon, hatchback, 4 x 4 and so on.

Try to pick options and use criteria which are meaningful to you — there is no need to think of five of each as the above diagram shows. You may need more or less than this. Also the number of options and the number of criteria do not need to match.

Draw a grid like the one above and give a score to each option. Then work out the total. What conclusions do you draw?

	Decision criteria					
Options	Cost	Sunshine	Travel time	Novelty	Things to do	TOTAL
Disney Florida	2	5	1	2	5	15
Disney Paris	3	2	4	3	5	17
Centre Parcs, UK	4	1	4	4	5	18
Beach, Spain	3	4	3	3	2	15

It is possible to refine the evaluation grid. The examples used so far assume that each of the decision criteria is equally important. However, this may not be the case. In the above example, for instance, travel time may not be particularly important while sunshine may be very significant.

This difficulty can be addressed by weighting each of the criteria. This can be done by giving a score of 1–5 to each criterion depending on its importance, where 5 is very important and 1 is of least importance. The scores for each destination can then be multiplied by this weighting to give a new total, as in the table below.

	Decision criteria					
Options	Cost [4]	Sunshine[5]	Travel time [2]	Novelty [1]	Things to do [3]	TOTAL
Disney Florida	$2 \times 4 = 8$	$5 \times 5 = 25$	$1 \times 2 = 2$	$2 \times 1 = 2$	$5 \times 3 = 15$	52
Disney Paris	$3 \times 4 = 12$	$2 \times 3 = 6$	$4 \times 2 = 8$	$3 \times 1 = 3$	$5 \times 3 = 15$	44
Centre Parcs, UK	$4 \times 4 = 16$	$1 \times 5 = 5$	$4 \times 2 = 8$	$4 \times 1 = 4$	$5 \times 3 = 15$	48
Beach, Spain	$3 \times 4 = 12$	$4 \times 4 = 16$	$3 \times 2 = 6$	$3 \times 1 = 3$	$2 \times 3 = 6$	43

The preferred option changes to Disney Florida because it scores more highly on criteria which are felt to be important.

Activity 2.12: How useful is the evaluation matrix?



How useful do you think the evaluation matrix can be in helping to choose between alternatives?

How-how

As noted earlier this technique can be used to choose between alternatives but it can also be used to work out how to implement an option once it has been chosen.

It is similar to the why-why approach discussed in section 2.1. In this case, it involves looking at an option and asking how it can be implemented until it is no longer possible to ask 'how' any further. At this stage all possible factors relevant to carrying out the decision should have been identified.

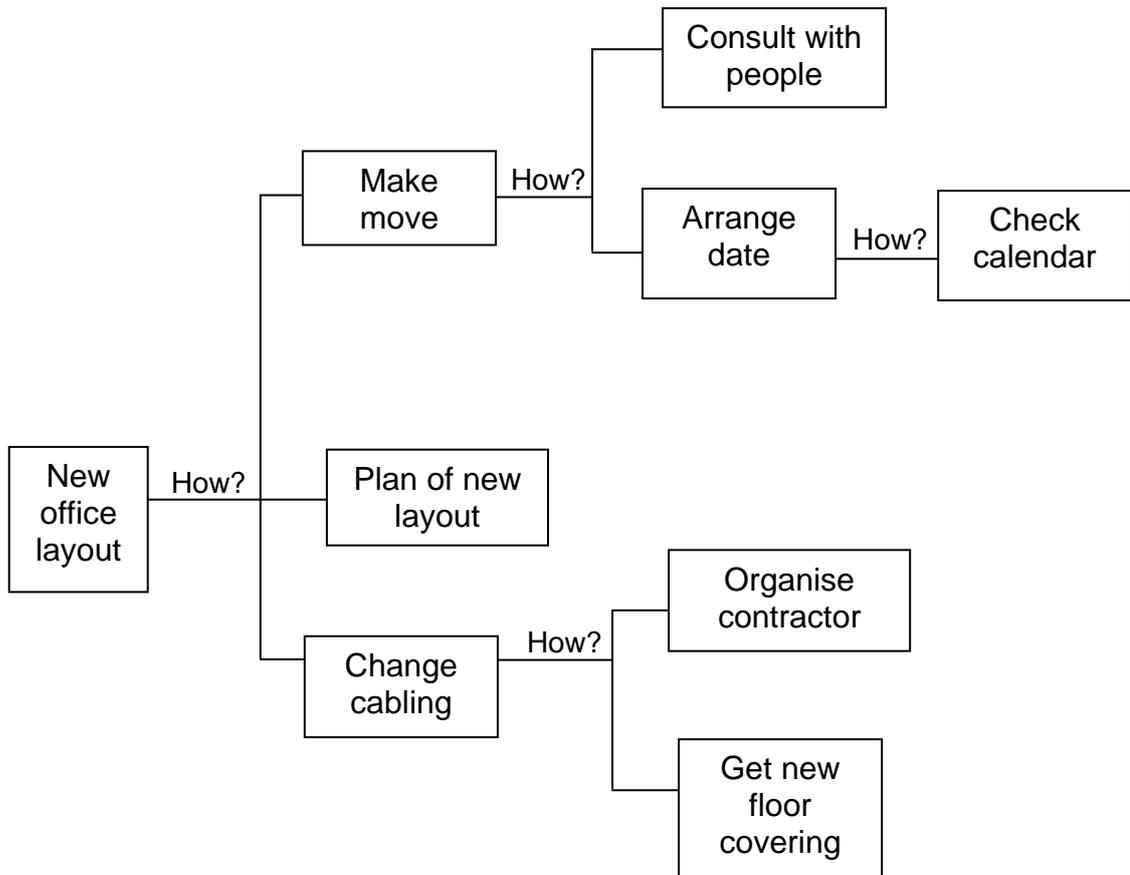
It is possible to do this for all available options. Effectively, this means that you are checking out how each can be implemented. It is then possible to determine, on the basis of ease of implementation, which option should be selected. The answers to the how-how provide the outline of an implementation plan. This approach can be valuable because it helps to highlight possible implementation problems. If these appear to be significant then a different option can be selected. This can avoid the trap of making a decision which appears to be sound until attempts are made to actually carry it out. It is only at this stage — when the decision has been made — that decision makers realise that there are significant obstacles to carrying it out. By then it may be too late to go back and commit to another course of action.

Despite its value before a decision has actually been made, the how-how approach can also be used once an option has been chosen — perhaps by using an evaluation matrix. In this case, the how-how approach becomes part of the process of implementing the decision.

Just like why-why, the how-how approach can be represented by a diagram, which has the advantage of making it easy to see what the results of asking 'how' are. The diagram takes an identical form to the why-why diagram. However, in this case, the solution is in the first box rather than the issue which demands a decision.

The following diagram is quite simple and does not perhaps contain all the possible responses to how-how. However, you should be able to see that additional boxes can easily be incorporated to show further responses to the question 'how?'

Preferred Solution



The diagram could be organised differently if the responses to the initial how question were organised into different categories. This is to be expected and reflects the fact that the various stages of decision making do depend on the circumstances of each particular situation and the way those involved in it see the situation.

Activity 2.13: Using how-how



Can you think of a situation where how-how would be useful?

It could be one where you know of an option which has been chosen and you could ask how it could be implemented. On the other hand it could be a situation where there is more than one option and the final course of action has not yet been selected. In this case, you could pick one possible option and work through a how-how analysis.

2.4 Gathering acceptance and implementation

‘Implement the chosen option’ is the final stage of the rational decision making model. This is clearly important since the success of any decision depends on it being carried out effectively. Strictly, though, implementing the decision is not directly part of making the decision itself. Implementation, of course, can only take place after the decision is made.

Nevertheless, the process of making any decision is likely to be more effective if it takes account of the factors which may affect the implementation of the decision. One of these factors is the extent to which the decision will be accepted by those affected by it. Vroom and Yetton’s (1973) model of group decision making in section 1.6 is an example of how the making of a decision may be influenced by its possible impact on those affected by it.

The discussion on how-how in section 2.3 also raised the matter of implementing a decision. This section takes this forward and concentrates on gathering acceptance and implementing a decision. It looks at three aspects of this: setting objectives, planning and stakeholder analysis. It starts from the point of view that a decision has been made. The tasks now, therefore, are to ensure that those affected by it are comfortable with the decision and that it is carried out effectively. However, this section also makes the assumption that the process of making the decision has taken into account gathering acceptance and implementation matters.

Setting objectives and planning are closely connected and both apply mostly to the process of implementing a decision. Stakeholder analysis applies more to gathering acceptance of the decision. However, it is worth remembering that gathering acceptance and successful implementation of a decision are part and parcel of the same thing.

It is perhaps also worth remembering that gathering acceptance and implementing a decision tend to be more important for larger decisions. Non-routine operational decisions which may be made quickly may have to be implemented as soon as possible after they are made.

Activity 2.14: The link between gathering acceptance and implementing a decision



It may be worth pausing for a moment just to confirm that gathering acceptance and implementing a decision are closely related to each other. Why do you think they have been described as ‘part and parcel of the same thing’?

Can you think of an example of a situation where attempts were made to implement a decision which people did not like? What happened?

Setting SMART objectives

This is something you may well have come across in other contexts. It is relevant to decision making because, in order to implement a decision, it is necessary to have clear objectives about how this will be done. Unless this is the case, then it will not be possible to be sure that a decision has been implemented as intended. Objectives should meet five criteria, denoted by the acronym SMART. The table below indicates what the letters mean.

S — pecific	The objective should be precise
M — easurable	It should be possible to measure whether or not the objective has been achieved
A — chievable	It must be possible to achieve the objective
R — ealistic (or R — elevant)	The objective must be relevant to the situation or the person concerned
T — imed	The objective must have a specific time frame

An example of a suitable objective may be:

To give a talk on personal safety by a police officer to children in P6 and P7 at all primary schools in Town X by 31 December of the current year.

An objective like this may stem from a decision in response to concerns among members of the public that young people may be at risk from the activities of undesirable individuals. The overall decision could have been to devote more resources to schools liaison. As part of this, there has been a decision to talk to young people about personal safety.

The objective meets the five conditions above in the following ways:

S — pecific	The objective states exactly what will be done and by whom. There is no doubt about what it is seeking to achieve
M — easurable	The objective can be measured by gathering data on visits and checking that all schools were involved and that P6 and P7 pupils attended the talk
A — chievable	The objective can be achieved assuming suitable and sufficient resources are available, eg persons who have the skills needed to give the type of talk required and who are required to give them as part of their duties
R — ealistic (or R — elevant)	The objective is relevant provided there are persons who have this task as part of their duty. It would not be a relevant or realistic objective if it applied to persons whose work involved fraud investigations, for example
T — imed	The objective has a clearly specified time scale — the end of December in the current year

Activity 2.15: Devising SMART objectives



In principle, it is straightforward to develop SMART objectives. Sometimes, though, it can be harder than it looks.

Here are a couple of examples:

- 1 Reduce the waiting time for customers at the reception desk.
- 2 Improve the motivation of team members.

Do you think these meet the SMART criteria? If not, which ones do they not meet?

Planning

Setting objectives is the first stage of setting out a plan to implement a decision. The stages involved in setting out a plan are listed in full on the next page.

You will see as you look through them that, in some respects they resemble the rational decision making model. Setting objectives is similar to setting criteria for the decision and may perform a similar function to defining the issue and clarifying the situation in which a decision has to be made.

Generating and evaluating options is exactly the same as a stage in the rational decision making model. This is because, once a decision has been made, there may be several ways of actually carrying it out. This means that any decision usually involves a series of other decisions. This is one reason why the process can become complex. It also reinforces the importance of recognising that any approach to decision making may be 'messy' as section 1.4 pointed out.

The stages of planning are also like the rational decision making model in that they represent a framework within which managers and others can operate. The stages provide a guide as to what factors should be considered and how a plan to implement a decision could be constructed.

Setting objectives	What the plan to implement the decision will achieve
Generating and evaluating options	Finding out the different courses of action which are available and which is the most appropriate
Identify the activities required to implement the chosen course of action	The particular things that need to be done to carry out the chosen option
Sequence the activities	The order in which the activities should be undertaken
Identify the resources	The resources which will be needed to carry out the activities which the plan requires
Prepare action plans and schedules	Identifying who will do what and when it will be done by
Monitor and control	Check that the plan is being carried out as scheduled and taking corrective action where needed

Activity 2.16: My experience of planning



Think about your own experience of planning. This could be experience of projects at work or more straightforward plans — such as arranging for a particular event to take place. You may have experience from your own personal life such as planning a wedding or a big anniversary party.

How well do the stages above fit in with it?

Planning is important here because of its significance to the successful implementation of a decision. It is not appropriate in this context to discuss planning in depth. The key point here is to remember that implementing a decision successfully is a critical aspect of making a decision. A decision, as you know, can be defined as ‘a commitment to a course of action’ and a plan is part of this commitment. There are many examples (some of which you may know only too well) of wise decisions which did not turn out well because their implementation was poorly planned.

Nowadays planning is often associated with techniques of planning. Many of these concentrate on sequencing the activities required and on monitoring and controlling the progress of the plan. To this extent they do not cover directly all the techniques of planning. However, in order to make full use of these techniques it is helpful to make sure the other stages of planning are taken into account. For example, sequencing activities is much more effective if you are clear what the actual activities are and why they contribute to the best way of planning the implementation of the decision.

Activity 2.17: Following up planning



You may be interested in planning techniques and want to find out more about them. Planning is certainly an important skill for managers and some familiarity with relevant techniques can be very useful. One starting point could be to gather some information about them using the internet. One approach is using Gantt charts. A Gantt chart is a graphical representation of the duration of tasks against the progression of time.

You can draw Gantt charts in Excel and there is a short note on how to do this at:

<http://office.microsoft.com/en-gb/excel/HA010346051033.aspx>

You will find examples of Gantt charts on Google Images.

Stakeholder analysis

This is more to do with gathering acceptance for the decision than with the direct implementation of a decision. As has already been pointed out, a decision is much easier to implement if those affected by the decision are willing to accept it.

Also, taking a decision which may not be accepted is unlikely to be a sensible course of action. When selecting the best option from among those available, decision makers should take into account the extent to which the decision will be accepted by those who will be affected by it.

Nevertheless, gathering acceptance for a decision is a key part of its implementation. Those affected by it may know that it has been made — and have indicated that they will accept it. However, they

may still have some doubts and misgivings which may need to be addressed.

Stakeholder analysis — sometimes called stakeholder mapping — is one technique which can be used to help think about how to gain acceptance for a decision. Broadly, it consists of three steps:

- 1 Identify the stakeholders who will be affected by the decision.
- 2 Work out which of these will gain and which will lose as a result of the decision.
- 3 Find ways to address the concerns of those who may lose out.

The techniques considered here are relevant to the second step. The first step depends on each particular situation, while the third step involves issues about dealing with resistance to change which are beyond the scope of this material.

Once you have made up a list of those who may be affected by the decision, you can consider their situation using the matrix below:

		INTEREST	
		Low	High
POWER	Low	A Minimal effort	B Keep informed
	High	C Keep satisfied	D Key players

The four boxes represent different groups of stakeholders, depending on their power and interest they have in the decision. Group A, for example, represents stakeholders who have little

interest in the decision and also have little power. Hence, there is little point in spending a lot of time and effort with this group. On the other hand, stakeholders in group D have both a lot of interest and a lot of power. As a result, it is likely to be important to get their acceptance if the decision is to be implemented successfully.

Activity 2.18: Creating your own matrix



Now try to make up your own matrix.

Think of the implementation of a decision with which you have been involved.

List the main stakeholders relevant to its implementation.

Draw a matrix like the above and fit the stakeholders into Box A, B, C or D depending on their level of interest and power for the decision.

When doing the above activity you may have realised that the matrix says nothing about whether the various groups support or oppose the decision. It merely draws attention to those who are interested in the decision and who also have power. There may be key players, for example, who are very happy to accept the decision.

It is possible, therefore, to develop the matrix by looking at each of the stakeholders you have included and categorising them. One way to do this is to give each a letter depending on the extent to which they accept the decision. There a number of different ways of classifying stakeholders but one that could apply here is as follows:

S — Support (are in favour of the decision and will support its implementation)

N — Neutral (do not mind if the decision is implemented but will not be concerned if it is not implemented; stakeholders in this group will not oppose the implementation of the decision but will not actively support it)

O — Oppose (are against the implementation of the decision and will try to prevent this happening).

Putting the matrix and the above together can help to indicate where work needs to be to gather acceptance for a decision. The main difficulties are likely to arise with stakeholders in box D (key

players) who have been classified as O (opposed to the decision). However, if the decision has been carefully considered beforehand, it is possible that the views of key players have had a strong influence on the decision that was actually taken. If this is the case, the chances of a combination of D and O may be slim.

The above merely gives a flavour of gathering acceptance. It is particularly important when a decision involves a substantial change. However, like setting objectives and planning, it is a valuable reminder that deciding what to do in any situation also involves actually carrying the decision out. It highlights the point already made that the earlier stages of the rational decision model have an effect on the later stages. One of the reasons why it may be important to check out options is that it may lead to a decision which can be implemented more easily and, as result, is more effective.

2.5 Other techniques of decision making

The final section of Outcome 2 looks at two techniques which relate to the decision making process as a whole rather than to particular stages of the rational model. They are decision trees and cost benefit analysis. Each will be discussed in turn.

Decision trees

You have already seen an example of a decision tree. Section 1.6 on group decision making discussed Vroom and Yetton's (1973) consultation model for group decision. You may remember that it worked a little bit like a checklist by giving team leaders a series of questions. By answering 'yes' or 'no' team leaders can work their way across the diagram and find out what is the best route to take in any particular situation. Effectively, therefore, the diagram represents an aid to making the best decision in the circumstances.

This is what a decision tree seeks to do. It is a method of laying out options and looking at the various outcomes that will result from choosing from the available options. Hence, it provides a structure to assist decision making. Decision trees also provide a way of quantifying possible options.

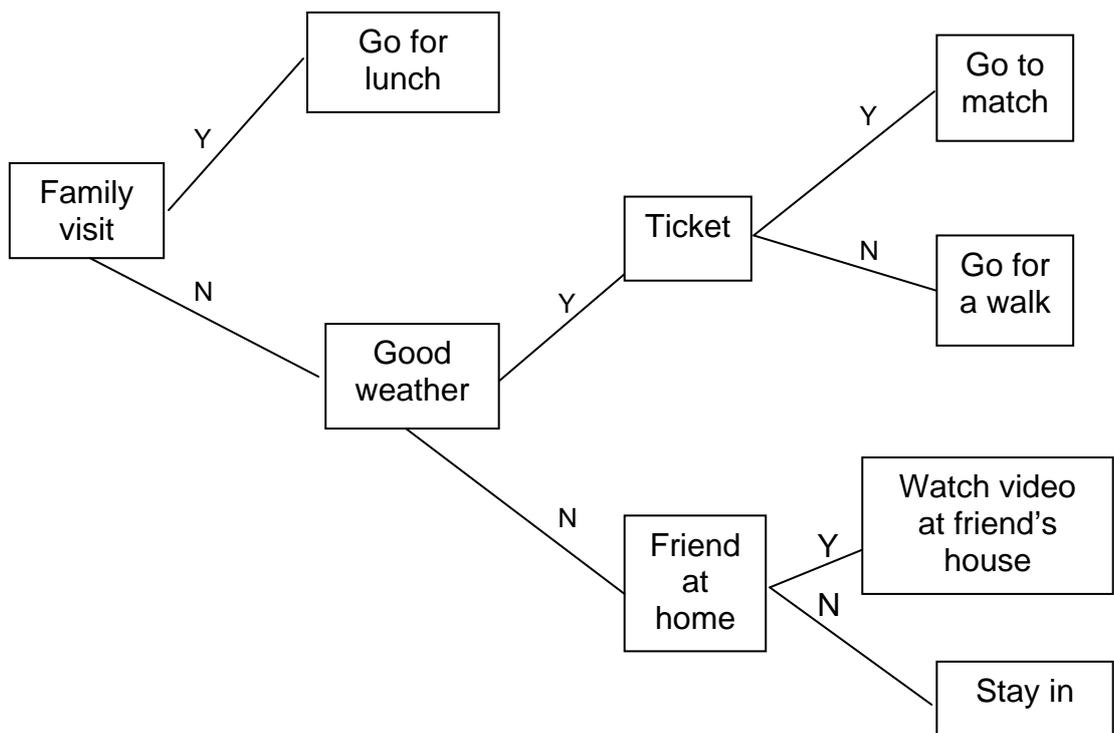
Perhaps the easiest way to understand decision trees is to work through a simple example.

Imagine a simple decision that you may face. Let's say that it is about what to do on Saturday. It is possible that family members will come to visit. If they do, you normally go out for lunch. However, it is also possible that they may not. If this is the case, then what you will do depends on the weather. If the weather is fair and you can get a ticket you will go and watch a football

match. If you cannot get a ticket you will go for a walk. However, if the weather is not good, you will either stay in or go to a friend's house to watch a video. This will only be possible if your friend expects to be at home.

The situation can be represented by a decision tree (see below). It is possible to illustrate the decision tree vertically as well as horizontally as is done here. The horizontal format is the more common.

You can see from the diagram that it can be read in the same way as Vroom and Yetton's model. It helps to demonstrate one of the main advantages of decision trees, which is that they can help to apply logic to decision making. They are therefore based firmly in the tradition of the rational decision making model. Decision trees also help to set out the various stages in a decision making process and help to highlight that any decision may be the consequence of a number of other decisions.



Activity 2.19: Examples of decision trees



Decision trees are increasingly being used to help people make decisions. One reason is that they lend themselves to being used online. The Financial Services Agency, for example, have produced information about stakeholder pensions which contains decision trees designed to help people decide whether or not to take out a stakeholder pension. It is available online at:

www.moneymadeclear.fsa.gov.uk/tools/stakeholder_pensions/notes_index.html

In a similar vein, the Pensions Regulator has produced a decision tree which employers can access online to help them decide whether or not they should offer stakeholder pensions to employees. You can look at it on:

www.thepensionsregulator.gov.uk/stakeholderPensions/decisionTree/index.aspx

The NHS has developed a much more elaborate 'Incident Decision Tree' to help clinicians and NHS managers decide on appropriate management action in cases where NHS staff have been involved in a serious patient safety incident. It takes 30–60 minutes to complete and can be viewed at:

www.npsa.nhs.uk/nrls/improvingpatientsafety/patient-safety-tools-and-guidance/incidentdecisiontree/

You may find it helpful to look up these sites. Possibly, the most user-friendly is the Pensions Regulator but to use it you will need to imagine that you are an employer.

Decision trees can also be used to quantify the possible consequences of a decision. Again, this can be illustrated by a simple example.

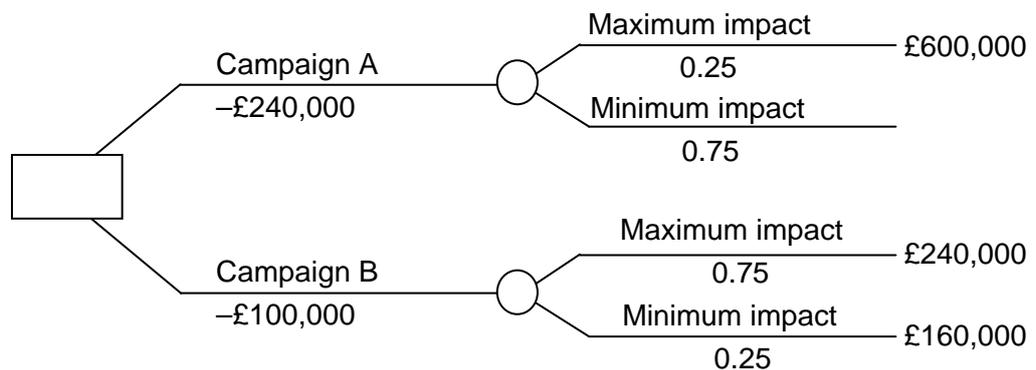
Imagine that a publicly funded organisation is trying to decide which of two possible promotional campaigns to use. A possible example could be raising awareness about legislation such as the requirement not to use mobile phones while driving. The budget for all promotional campaigns is £400,000.

Campaign A will cost £240,000. It will use innovative and unusual methods which will be aimed at people who do not normally pay attention to such campaigns. If it is successful, it will produce cost savings in terms of fewer prosecutions, reduced police time and so on. These are estimated to be worth £600,000 if the campaign achieves maximum impact. However, there is no guarantee that this will happen. Previous experience suggests that campaigns like this have a 25% chance of successfully achieving their maximum effect. However, whatever happens, it is expected that

the campaign will produce some savings which are estimated at £160,000.

Campaign B will cost £100,000 but will use traditional methods which are known to have worked in the past. The maximum savings in this case are expected to be £240,000 and there is 75% chance of achieving these. Even if the campaign achieves minimum impact, savings of £160,000 are still expected to be achieved.

The decision tree could like the following:



The diagram illustrates two of the main conventions used in decision trees:

- a square, which represents a decision that has to be made (known as decision points)
- a circle, which represents a point at which different outcomes could occur (these points are known as chance nodes).

From the information given, it is possible to calculate the expected values of each decision. This is done by taking into account the predicted outcome and the probability of that outcome occurring.

Don't worry if you find the calculations difficult to follow. The main point is that the data given above can be used to put a figure on the expected benefits of each option. It is then possible to use these figures to decide which option is the better.

For Campaign A, the probability of maximum impact is 0.25 with the prospect of savings of £600,000. The expected value of this is $£(600,000 \times 0.25) = £150,000$.

The expected value of the minimum impact can be calculated in a similar way. It is $£(160,000 \times 0.75) = £120,000$.

Overall, therefore, on average Campaign A can be expected to yield $£(150,000 + 120,000) = £270,000$. The costs will be £240,000. Hence, Campaign A can be expected to result in a return of £30,000. This is a rate of return of 12.5% (£30,000 divided into £240,000).

A similar calculation can be done for Campaign B. Its expected value will be:

$$\begin{aligned} \pounds((240,000 \times 0.75) + (160,000 \times 0.25)) &= (180,000 + 40,000) \\ &= \pounds220,000. \end{aligned}$$

This gives a gain of £120,000 (£220,000 – £100,000) which is equivalent to a rate of return of 112% for Campaign B.

Both campaigns would be compatible with the budget constraints. However, the decision on which campaign to use is, in the modern jargon, a ‘no brainer’. The decision tree indicates that Campaign B will yield a much greater rate of return.

Activity 2.20: Is Campaign B better?



Using a decision tree does help to focus the decision. But is it necessarily the case that Campaign B is the better option? What factors might cause you to question the decision?

The above activity highlights the main issues with decision trees. They do have several benefits, such as a logical approach and encouraging decision makers to think through the available options and their likely consequences. As the examples in Activity 2.19 show, they can also be used as a way of programming non-routine decisions. In this way, they can help decision makers reach the best possible decision.

Developing decision trees can help decision makers make use of past experience and offer guidance to others who face similar situations.

However, they do have drawbacks. The main one is that they appear to give a scientific and logical basis to decision making. This is particularly so when they are used to calculate the expected benefits of a decision. There is a temptation to assume that the available figures are accurate and appropriate. As Activity 2.20 shows, this may not be the case. Even if figures are not involved, decision trees may encourage a tendency to simplify the options available. This may help the decision making process, as the alternatives to the rational model in Outcome 2 pointed out. However, it may mean that critical options could be ignored.

Activity 2.21: Uses of decision trees



You may have had experience of using decision trees. If you have, in what circumstances have you made use of them? How useful did you find them?

If you have not used decision trees, can you think of situations in your own work where they could be used? How would they help do you think?

Cost benefit analysis

In many ways, this has already been covered in the preceding discussion on decision trees. Strictly cost benefit analysis is an economic technique. Its main use is in helping to make financial decisions particularly with regard to major public spending projects such as new roads, bridges, airports, railways and so on.

Essentially, it involves what its name suggests. The expected benefits of a project are weighed up against the anticipated costs. If the rate of return is considered acceptable, then this provides support for a decision to go ahead with the project. The actual calculations can be complicated particularly since cost benefit analysis takes into account benefits which may not be easy to quantify. A cost benefit analysis of a new railway, for example, may consider the anticipated benefits which may stem from reduced road use. These may include estimates of the time saved by users of the new railway by comparison to the time spent travelling by road. In order to include such information in a cost benefit analysis, it is necessary to put a monetary value on the time saved.

For your own approach to decision making, however, it is quite enough to stick with the simple approach. Cost benefit analysis involves weighing up the costs of a decision against the expected benefits. As you have just seen with Campaign A and Campaign B, this can be done in conjunction with a decision tree.

However, it does not have to be confined to situations where decision trees are used. For any decision you can look at the costs and compare them against the benefits which you expect to flow from the decision. You can, of course, also do this for the various options which you identify. You can then choose your preferred option on the basis of the extent to which the benefits outweigh the costs.

It can sometimes be difficult to compare costs and benefits but the technique can help you to make sure that you have considered all the factors which may affect any decision that you make. It can, therefore, be particularly useful for important decisions.

Activity 2.22: Using cost benefit analysis



Think of a decision which you have made — or one which you know well.

Consider the costs of the decision and list them on the left hand side. Now think about the benefits and list them on the right hand side.

Do the benefits outweigh the costs?

Costs	Benefits
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2.6 Some concluding comments — and some thinking about decision making

This Outcome has looked at a number of techniques which can be used to help apply the rational decision making model in a manner which will help you to make sound decisions. Using techniques such as those described here and others like them can help you develop your own approach to decision making.

In many ways it reinforces the conclusion of Outcome 1 — that the rational decision model provides a framework within which decision making can be approached. As you also know from Outcome 1, the rational decision making model is an ideal and it is not possible to use it in its pure form, except perhaps for non-routine decisions where a programmed approach to decision making can be adopted.

Activity 2.23: Your organisation and the rational model



Some organisations have 'rules' for decision making. Often these are similar to the rational model.

Does your organisation have any such rules? If so, what are they? How do they fit in with the rational model?

The techniques reinforce Outcome 1 in another way. They encourage you to think through the various aspects of a decision to make sure that you don't miss out on anything that is significant. As we saw in Outcome 1, there will be cases where you can do this very quickly, especially when you have a lot of experience of the situation in which you are required to make a decision.

Many of the techniques can be used by a group of people and this adds another useful point to decision making. The situations in which you have to make decisions are often not clear cut and it can help to get other opinions to make sure that your approach is likely to work.

Activity 2.24: Taking a decision



This may be a good place to practise your approach to decision making. Below is a decision making exercise where you have to decide which one of six people will get a kidney transplant.

When you have made up your mind, think about the process you used in order to come to your decision. What conclusions do you draw?

Decision making exercise

All of the six people described below are receiving kidney dialysis treatment. This is time consuming and disruptive and means that it is very difficult for each of them to live a normal life. Each would benefit considerably from a kidney transplant. This would improve the quality of life that each could have from a physical point of view and would also allow each to return to, or improve, the life they had before they suffered from kidney trouble.

All have the same tissue match. A suitable donor has been found and one of the six can now receive the much needed transplant. However, only one donated kidney is available. There is no indication as to when, or even if, another suitable donor will be found. You have to make a decision about who will be given the transplant.

James is 28 and married with two pre-school children. His illness has forced him to put on hold a very promising career in the police. Getting the transplant would enable him to resume his career. It would also enable his wife, who is a nurse, to return to full-time work as she has only been able to work part-time since James became ill. The return to work would also ease the financial burdens which James and his wife have. Their reduced income has meant they may have to sell their house as they are having difficulty meeting the mortgage payments.

Sheila is a 64 year old grandmother. She is a divorcee and lives alone except for her four dogs. She has little contact with her daughter and grandchildren who live a considerable distance away. She is retired and comfortably off because she has a pension from her job as a civil servant. Her main interest in life is playing bridge. Her illness means that she can no longer play as much as she would like. A transplant would enable her to play bridge several times a week as she used to do and would mean that she would no longer have to rely on her neighbour to walk her dogs.

Kevin is Afro-Caribbean and has mixed Nigerian and Scottish ancestry. He is 20 and was a promising athlete at school, where he won a national age group title in the long jump. However, since leaving school he has become involved with a 'bad crowd' and now lives in a charity hostel for young people with drugs and alcohol dependency. He has several criminal convictions and is currently the subject of an ASBO imposed because he and others regularly caused disturbance in open areas close to private housing. He hopes that a transplant will enable him to get his life back on track and go to college where he can learn to be a chef.

Shazia is a 34 year old full-time mother of three school age children. Getting a transplant would enable her to resume activities which she has had to give up. She used to look after her sister's two pre-school children because her sister has been diagnosed with cancer and found it hard to care for them herself. She is a devout Muslim and used to work a lot with young people in her community, for example in teaching them to read the Koran. She is very well respected and liked by others in the community, who hope that she will get a transplant as the work she did is greatly missed.

Maria came to the UK from Poland four years ago to continue her studies in medicine. She is now 26 and her illness has prevented her from working as a doctor as she had hoped to do. She hopes that a transplant will enable her to take up employment. Her family are keen that she return to Poland and work there as they say there is a shortage of good doctors and people cannot get treatment. Her family raised money for her to come to the UK and Maria feels a strong duty towards them. However, her own preference is to stay in the UK.

Charles is a 45 year old company director who regularly features in articles listing 'The 100 most important people in Scotland'. His company has earned many awards for innovation and exports and is regarded as a world leader in its area of information technology. It is often quoted by politicians as an example of what other Scottish companies should aspire to. Charles has been married three times and has a reputation as a philanderer. His illness has meant that he cannot work as much as he used to and his company is not quite as successful as it was. He is sure that a transplant would enable him to reverse the decline and, perhaps, increase his contribution to the Scottish economy even further.

Remember you can only choose ONE person.

The above activity may help you to think about your approach to decision making. As you have no doubt realised, it is possible to go through the stages of the rational model in trying to decide what to do.

Activity 2.25: Some reflection



The next — and last — Outcome is about evaluating the decision making process.

To prepare for this, it may be useful to reflect a little on the ideas in Outcome 2.

Which ones did you think would be most useful? Which would be least useful to you? What would be your justification for your choice?

Study Notes for Outcome 3

Evaluate the decision making process

Introduction

These study notes cover Outcome 3, 'Evaluate the decision making process'.

The material so far has covered a number of different models of decision making and has considered how you can develop your own approach to decision making.

Outcome 1 showed that the rational decision making model is seen as the ideal approach to decision making. However, following the rational model exactly is something which may be impossible, especially for non-routine decisions. The concept of bounded rationality, to take just one example, shows that the mental capacity of human beings is such that we can only hold some of the possible alternative options in our head at any one time. This means that considering all available options, which the rational model requires, cannot be done.

Difficulties like this have led to a number of alternative approaches to decision making, some of which were also explored in Outcome 1. In addition, as Outcome 2 showed, a number of techniques based on the steps of the rational model have been developed. Managers and other decision makers can use these techniques to develop their own approach to decision making.

Outcomes 1 and 2 together suggest strongly that this approach will be based on the structure of the rational model. However, it is also likely to be flexible, so that it can cope with the range of decisions which managers and other people have to make. This flexibility can allow for the fact that it is not possible to apply the rational model strictly. It can also take account of the potential dangers for decision makers, such as ignoring important options.

The main purpose of developing such an approach is to try to improve the quality of the decision making process. This, in turn, should lead to better decisions and reduce the possibility of making bad decisions. As a result, managers and other decision makers will be more effective because they make more effective decisions.

This means that it is important for managers to have some idea of how effective the decisions they make actually are. In order to do this it is important to evaluate both the decision making process and the actual decision itself. This final Outcome is about the evaluation of decision making.

Activity 3.1: Why is evaluation important?



Think for a minute or two why it is important to evaluate decisions and the decision making process which led up to them. List your thoughts below.

As well as the reasons given in 'Comment on Activity 3.1', there are two other important aspects of evaluation which may not be quite so apparent (although you might have thought of them as well).

Section 1.4 looked at alternatives to the rational decision making model. You may remember that intuition or 'gut reaction' was one of these. You may recall too that Hayashi (2001), who believes that gut reaction is important, also pointed out that intuition can produce very rash decisions because it can cause decision makers to neglect significant factors in a situation. His conclusion was that successful decision makers who do make intuitive decisions also have systems which enable them to continually check what happens. If necessary, they can revise and alter their decisions. In effect, Hayashi is arguing for a process of continual evaluation of decisions.

Evaluation also highlights the fact that your decision making approach is something that evolves and develops. With experience, you may be able to make some decisions very quickly. In effect, as far as you are concerned, they become much more like routine decisions. Over time, you may develop your own way of programming some decisions.

This Outcome begins by examining the implications of making comparisons between the rational decision making model and the way in which actual decisions have been made. This is because this is one of the most common approaches to the evaluation of decisions. It is also possible to make comparisons with alternatives to the rational model. There are other possible evaluation criteria and these will also be considered.

Evaluation helps you to consider the strengths and weaknesses of a decision and this Outcome goes on to look at these. Finally, it considers how you can draw lessons from the evaluation for your own approach to decision making.

Activity 3.2: Evaluation and good and bad decisions



Do you think people are more likely to evaluate good decisions or bad decisions?

3.1 Comparisons with the rational model

Perhaps the most common way of evaluating decisions is by comparing what happened with the steps of the rational model. As the above activity implies, this is usually done when things have not worked out as anticipated.

An example may be the best way to start looking at this. This example involved a big decision that proved unsuccessful.

In 1994, the American company, Quaker Oats, decided to buy Snapple, a soft drinks company, for \$1.8 billion. The decision was made by the Chief Executive Officer, William Smithburg. He had also been responsible for the purchase of Gatorade, a maker of sports drinks in 1983. The price for Gatorade was \$220 million and it grew into a business worth \$3 billion. Partly because of this, Smithburg had a reputation of being able to identify good buys. Unfortunately, the purchase of Snapple failed and, in 1997, in order to cut its losses, Quaker Oats sold Snapple for £300 million. William Smithburg lost his job.

Experts argued that Quaker Oats concentrated on recent experience which meant that they relied heavily on the flawed historical precedent of the successful purchase of Gatorade. The success of the purchase was not examined closely and it was attributed to William Smithburg's insight. It is possible that the Gatorade decision could have been lucky.

It is not possible on the basis of the limited information above to carry out a full comparison with the rational model but it is possible to make some guesses as to what might have happened when the decision to buy Snapple was made.

It helps when making the comparison to use a table. The one on the following page takes each stage of the rational decision making model and makes some comments on the example. Inevitably, these comments are speculative because of the amount of information. However, they do illustrate how an actual situation can be compared with the rational model.

Table C

Stage in the rational model	What happened in this case
Define and clarify the situation in which a decision is required	Quaker Oats may have been looking for a chance to replicate Gatorade — effectively they may have been looking for a solution rather than carefully considering what their current situation was.
Identify alternative options and gather information about them	They probably did not consider any other options — Snapple was available and so it was bought. Perhaps little information was gathered about Snapple and problems only came to light afterwards — when it was too late and the company had been bought.
Compare each option against pre-determined criteria	There was only one option and perhaps only two criteria — whether William Smithburg thought it would be a good idea and if it fitted in with what had happened before with Gatorade. The lack of other information (see above) may also have helped to limit the number of criteria.
Select the best option	The option to buy Snapple did fit the criteria. William Smithburg's reputation met the first criteria and Snapple, like Gatorade, was a drinks company. However the criteria seem to be flawed perhaps because of a failure to explore the option fully and consider possible alternatives (one of which would have been not to buy).
Implement the chosen option	This was completed in that Snapple was bought, but there is no information about what took place afterwards. It may have been that it was hard to integrate Snapple into the main business, which is a common problem in cases like this.

Activity 3.3: What do you think?



Do you think the explanations given in Table C above make sense? Do you think they illustrate what might have happened?

As you think about this, you may like to concentrate on whether the explanations help to explain why this decision did not work out as planned.

The above example also helps to show why evaluation is important. The decision to buy Gatorade proved to be successful and perhaps for this reason the process behind it was not examined carefully. If this kind of evaluation had taken place, Quaker Oats might have been able to make a judgment on whether the decision was 'lucky' as some experts suggested. The company may also have been able to set some more stringent criteria for the decision to buy Snapple.

The example also illustrates something else which is a key factor in all decisions. A decision is a 'commitment to a course of action'. As such, it is about the future, which can be unpredictable. Any decision, therefore, involves some risk. It is quite possible that Quaker Oats could have given more thought to buying Snapple than it seems to have done. Nevertheless, things could still have worked out badly. The chances of this happening may have been reduced, however, if some evaluation had been undertaken.

One of the benefits — but also one of the dangers — of evaluation, therefore, is that it does have the advantage of hindsight. As a result, it can take into account events that a decision maker could not have known about. Part of the purpose of evaluation may be to consider whether or not decision makers could have reasonably have foreseen what actually happened.

Activity 3.4: A comparison of my own



You have already made some comparisons between decisions you have made and the rational decision making model.

Go back to Activities 1.6 and 1.8. Look through your responses and think about them again.

Maybe you could take one of the decisions and do another comparison now that you have finished Outcome 1 and have read Outcome 2. There is a table on the next page in which you could jot down your thoughts.

Stage in the rational model	What happened in this case
Define and clarify the situation in which a decision is required	
Identify alternative options and gather information about them	
Compare each option against pre-determined criteria	
Select the best option	
Implement the chosen option	

It may be sensible to close this section with a warning. The rational decision making model, as has been emphasised throughout, is about the process of decision making. Comparing the process of making an actual decision with the rational model merely highlights discrepancies between the decision and the rational model. It is possible that these may help to explain why things went wrong. Quaker Oats, for example, just assumed that following a previous decision would be sensible and did not check out other options.

The warning, then, is to remember that discrepancies between what actually happened in a particular case and the steps of the rational model do not, of themselves, mean a decision is flawed. Comparison with the rational model is a valuable way to evaluate decisions but it may not be enough on its own.

3.2 Comparisons with alternatives to the rational model

Another way to evaluate a decision is by comparing it with alternatives to the rational model. This also concentrates on the process of decision making. It helps to show whether deviations from the rational model are ones that could reasonably be expected. If this is the case, then it may be that these are not the reason for a poor decision.

Using alternatives to the rational model can act as a complement to a comparison of an actual decision with the rational model. If the comparison reveals discrepancies then alternatives to the rational model may help to explain why they occurred. This, in turn, may help to make a more considered judgement about (a) the extent to which the decision making process was flawed and (b) the effect that this may have had on how satisfactory the decision turned out to be.

Again, this can be illustrated with an example of a big decision that didn't work out as expected.

In September 2004, Merck, a large US based pharmaceutical company, suddenly withdrew one of its most successful drugs, Vioxx, from the market. Vioxx was used to treat arthritis. According to Merck, the reason for the decision to withdraw it from the market was that new evidence had come to light about the effects of the drug. It appeared that the risk of heart attacks and strokes was increased for patients who had the drug for more than 18 months.

Merck's Chief Executive, Ray Gilmartin, said that Merck had withdrawn Vioxx voluntarily because it wanted to put 'patient safety' first. Apparently, he hoped to reinforce Merck's reputation as a responsible firm by going further than the company was obliged to do.

However, in October 2004, an article in the New England Journal of Medicine accused Merck of putting 'sales over safety'. Leaked e-mail and other internal documents suggested that some executives in Merck knew about the drug's potentially lethal side effects as early as 2000. They also indicated that Merck bullied outside researchers who questioned its safety, and that it trained its army of sales representatives to 'dodge' tricky questions about Vioxx from doctors.

After the withdrawal decision, David Graham, an official of the US Food and Drugs Administration, published his own independent research. It suggested that at least 80,000 cases of serious heart disease in the USA may have resulted from people taking Vioxx. Ray Gilmartin resigned from Merck in May 2005.

Again, a table can help to make a comparison. It would be possible to list in the left hand column all the alternatives discussed in section 1.4. However, only those which may apply to this example have been included.

Table D

Relevant alternatives	What happened in this case
Incrementalism	Not doing anything is obviously not a great departure from what Merck was already doing. Withdrawing the drug was a big step and the company may have been wary of moving such a long way from its current practices.
Satisficing/bounded rationality	It is quite possible that not withdrawing the drug looked like a satisfactory decision and no further options were explored. Also there could have been so many other options all with significant ramifications that those responsible for the decision could not cope with them all — simply because there were so many (bounded rationality).
Action rationality	There may have been a need to be seen to be doing something (even if it was negative) — at least some action had been taken.
Cyert and March	The decision may be explained by quasi-resolution of conflict. Merck may have looked at its goals sequentially. Perhaps, as others believe, it focused on profit first and made the decision. It was only later that it paid attention to safety and other goals.
Organisational learning	Perhaps Merck had a culture whereby Ray Gilmartin made key decisions (rather like Quaker Oats). He decided what to do and others followed.

Activity 3.5: What do you think?



This activity is very similar to Activity 3.3.

In this case, do you think the explanations given in Table D are a reasonable interpretation of what might have happened?

How do you think they can help to evaluate the decision?

In a sense, comparing a decision with alternatives to the rational model tends to highlight similar points to making a comparison between a decision and the steps of the rational decision making model. When evaluating a decision, it may be possible to begin by using the rational model as a comparison. The conclusions drawn from it about the decision can then be checked by comparing it against relevant alternatives to the rational model.

Remember that any comparison has the benefit of hindsight. It may well be easy after the event to identify steps which should have been taken and which were neglected at the time. So, try to bear this in mind when evaluating your own decisions. Try to think about what you could have done to avoid subsequent difficulties and what lessons you can take from this which will help you in the future.

Activity 3.6: Another comparison



Go back to your comparison in Activity 3.4. Using the same decision, compare what happened with some of the alternatives to the rational model.

Again there is a table on the next page to help you set out your ideas.

Remember that not all the alternatives may be relevant. It is quite possible that you may find that only one or two apply.

Relevant alternatives	What happened in this case
Intuition	
Incrementalism	
Satisficing/bounded rationality	
Action rationality	
Cyert and March	
Power and politics	
Organisational learning	
Garbage can model	

Comparing an actual decision with various decision making models can help to develop a standard process for making particular decisions. In other words, it can assist in the process of programming a decision.

The above examples suggest that making a full comparison is most appropriate to bigger or more important decisions. This is not always the case but it is certainly true that carrying out a full comparison is time consuming and, for this reason, may not always be possible. This is one reason why evaluations tend to take place when things seem to have gone wrong.

This, in turn, leads on the point that the criteria for evaluating a particular decision are likely to depend on the decision itself. For this reason, it is useful to look at other general criteria which could be used to evaluate a decision.

3.3 Other criteria for evaluation

Comparing an actual decision with the rational model, and with alternatives to the rational model, are strong methods of evaluating the process by which decisions are made. Often, an effective evaluation of a decision can be undertaken by using only these criteria. They can help to identify strong and weak aspects of the decision making process and can also help to assess whether an appropriate decision making process was used on any particular decision making occasion.

Both, however, concentrate on the process of decision making. You will remember that this is based on the idea that a good process is the best guarantee of a good decision, especially as decisions are always, to some extent, taken in conditions of uncertainty.

This does mean that comparison does not cover all aspects of a decision. A full evaluation, therefore, should include both the process of the decision and the actual decision itself.

In fact, there are other criteria which can be used in conjunction with comparison to assess the process of decision making. In addition, there are further general criteria which weigh up the actual decision itself. There is some overlap between them but the distinction can sometimes be helpful in deciding how to evaluate a particular decision. Each of the two will be considered in turn.

There are two main general criteria which can be used to evaluate the process of decision making. They are:

- length of time taken to make the decision
- costs of making the decision.

These criteria cover a number of other factors. For example, the length of time to make a decision will increase if a number of people participate in making it or if it involves extensive consultation. Both of these may, of course, also increase the cost.

Activity 3.7: Applying the cost and time criteria



Once again, try to think of a decision with which you have been involved. It can be a work related one or one from your personal life outwith work.

How can the time and cost criteria be applied to this decision as a way of evaluating how successful the process of making it was?

The cost and time criteria are closely linked to the comparisons considered earlier. For example, following all the steps of the rational model as far as is possible does take time and may well be costly. Some trade-offs may have to be made. Evaluation is one way of reviewing trade-offs and checking what effect, if any, they had on the results of the decision.

There are, as noted above, general criteria which can be applied to the actual decision itself. They include the following:

- recurrence of the problem — ie did the problem about which decision was made recur?
- cost of the implementing the decision — ie was the decision economic?
- ease of implementation of the solution — ie was the decision efficient?
- effectiveness of the decision — ie did the decision meet its intended purpose or purposes?
- fairness or equity of the decision
- effects on others of the decision.

Remember that these are general criteria. They may not apply to every decision. Also, a particular decision may be evaluated by tailoring a general criterion to the specific circumstances of a particular decision.

Activity 3.8: Evaluating the actual decision



This activity is also based on a decision with which you have been involved. Once again, it can be work related or from your personal life.

Which of the above criteria could be applied to evaluate the decision and why?

Would any of the criteria not be valid in your example? Again, why do you think this is the case?

Overall, therefore, there are a number of criteria which can be used to evaluate a decision. In any particular case it may not be necessary to make use of all of them. Which ones are used will depend on the purpose of the evaluation.

The purpose of evaluation varies from situation to situation but two specific purposes tend to be particularly common. Evaluation can help to identify the strengths and weaknesses of a particular decision or decisions and from these strengths and weaknesses, it may be possible to draw lessons which will lead to better decision making in the future.

3.4 Strengths and weaknesses

In many respects this section is stating the obvious. Strengths are good points of a decision and weaknesses are aspects of the decision which did not work out as well as intended. Evaluation can help to highlight what the strengths and weaknesses were of any particular decision.

There are, however, a few points to bear in mind when thinking about strengths and weaknesses.

Firstly, the importance of strengths and weaknesses may well depend on the type of decision. Outcome 1 pointed out that there are different types of decisions — strategic, tactical and operational. The strengths and weaknesses of strategic decisions may be much more significant than the strength and weaknesses of operational decisions.

Secondly, judging strengths and weaknesses has to take account of the uncertainty and risk surrounding a decision. There are many factors which can influence the success of a decision. In assessing strengths and weaknesses it can be useful to bear in

mind that there may be situations where the decision makers could not reasonably have foreseen what actually happened.

It is quite possible that decision makers deliberately took a risky option, knowing that it may not work out. On the other hand, decision makers may not have carefully assessed the risk and may have been caught out when it proved to be substantial. In cases like this, the judgement of strengths and weaknesses may be harsher than when the risk was carefully calculated beforehand.

Thirdly, remember that strengths and weaknesses can apply to both the decision making process and the decision. It is possible to follow a strong process but end up with a not-so-good decision and vice versa. Hence, what appears to be a successful decision may still highlight weaknesses in the decision making process.

Activity 3.9: Strengths and weaknesses



Return to your decision in Activity 3.8. In the light of your evaluation what do you think were its strengths and its weaknesses?

3.5 Drawing lessons for the future

This final section can also help to draw together some of the strands from all three Outcomes. The main purpose of this material has been to help you develop your own approach to decision making.

It has introduced the rational decision making model and some of the suggested alternatives to it. This is because there are good reasons to suppose that it is not possible to follow the steps of the rational model perfectly for non-routine decisions.

The material has, by and large, concentrated on non-routine or non-programmable decisions. There are, however, decisions which can be described as programmable where a decision making procedure can be devised. It may be possible through the use of information and communication technology to make the decision making process automatic.

Your involvement with decision making may well cover both programmable and non-programmable decisions. It may also include decisions which are routine in the sense that they have to be made frequently but which are not routine in that the circumstances of each case may be different. A decision taken in

one set of circumstances may not be appropriate on another occasion.

Hence, it is important that you are able to make decisions as effectively as possible. This may be in circumstances where it can be important to act quickly and in situations where there may be more time and flexibility to decide what to do.

This material suggests that your approach is likely to be based on the rational decision making model but take account of the fact that it cannot be applied exactly. It should also try to avoid some of the recognised pitfalls in decision making. Outcome 2 suggested some techniques which you could use to try to enhance and develop your approach.

Finally, this Outcome has covered evaluation, which as referred to in Outcome 1, can be seen as the final stage of the rational decision making model. Evaluation can help you identify the strengths and weaknesses of a decision and the decision making process. You can use these strengths and weaknesses to refine and adapt your approach to decision making. Over time, therefore, you will be able to enhance your competence and effectiveness and avoid the main pitfalls to which decision makers can be prone.

Activity 3.10: Learning lessons



Let's go back again to the decision in Activities 3.8 and 3.9 which you have already evaluated. What lessons are there from it for your own decision making?

Remember Hayashi's (2001) point that good decision makers constantly check their decisions to make sure things are working out as intended. If you adopt this approach to evaluation you will not only develop your overall approach but will also be able to take account of changes which you could not have predicted.

You can combine this 'instant' evaluation with more substantial evaluations every so often. These may be particularly valuable after you have made a big decision in a situation which was relatively new as far as you are concerned.

Activity 3.11: Your approach to decision making



So, what is your approach to decision making?
Why do you think it is appropriate at this point in time?

You have now completed the support pack for Decision Making.
We hope you have found it enjoyable and informative.

Suggested solutions to Activities

Comment on Activity 1.1

Your response will obviously depend on what you have actually done. However, some things you may have done could be:

- deciding what clothes to wear
- deciding what to eat at meal times
- deciding where to park your car
- deciding what tasks to undertake — eg reading this material
- deciding when to have a drink
- deciding what to drink — eg coffee, tea, water.

Many of these are kinds of decisions that we all make everyday. Some of them may be routine so that they do not feel like decisions. You may always, for example, have a cup of coffee as soon as you get into work, you may park your car in the same place everyday, you may always eat the same things for breakfast — or have nothing to eat at all. Some of the decisions too may not have been made today — eg you may have decided yesterday that you will start reading this book today.

It is possible that you had to make some other decisions which you may think are more important. You could, for example, have had to:

- decide on whether to buy a new car or move house
- decide on what to say to a colleague who has done something of which you do not approve
- decide on whether to make an application for a job vacancy which you have seen.

You may have thought for some time about what to do in these cases — and you may be entirely sure that you've done the right thing.

Comment on Activity 1.2

The common and different factors will depend on the decisions you have listed. However, you may have used criteria such as where the decisions were made, who made them, how quickly they were made, whether a lot of time was spent in gathering information before deciding what to do, whether the decision turned out to be good or bad, whether the decision was important or trivial; whether the decision was made regularly or occasionally and so on.

You may, incidentally, begin to see some patterns eg did important decisions take longer?

Comment on Activity 1.3

Your response will depend on the kind of decision you chose. But it may have looked something like the following. Suppose the decision is buying a new house:

1 Intelligence activity

Becoming aware of the need to move — eg existing house too small/too large; location of job has changed; dissatisfaction with current neighbourhood; realisation that a long term desire to move can now be pursued.

2 Design activity

In this case, design is likely to involve gathering information on available properties such as where they are, what characteristics they have, how much they cost; what finance will be available and so on.

3 Choice activity

This would be making the actual choice of which house to make an offer for.

NB It is possible to approach this in another way. You may, for example, see a house you like (intelligence activity) and then analyse the courses of action you have — eg buy or not buy, what finance deals there are etc (design activity). You may then go ahead with an offer (choice activity).

You may have found that the three stages did not follow neatly one after the other. A common experience is finding that there was little design activity after the intelligence phase. This is because the choice was made as soon as it became apparent that there was an occasion for making a decision. The design activity may then have taken place afterwards.

If this did happen, did it affect the quality of the decision? Would it have been better or worse, do you think, if the sequence had been followed?

Comment on Activity 1.4

It's more likely that you were involved in your example of a group decision than in your example of an organisational decision — although this does depend on your experience. A group decision could be an agreement among members of a team to divide work up in a particular way — it could be a family discussion on where to go on holiday. It is quite possible that you have been involved in a consultation process leading up to an organisational decision.

The differences will depend on the examples you have chosen. However, they may include:

- the longer time taken to make organisational or group decisions (because others were involved)
- the need to communicate the decision to others (because of the number who may be affected)
- the possibility of disagreement and resentment (there may be disagreements among those involved in the decision making process, for example, some people may be upset because they have not had a say)
- the extent to which the decision was acceptable to others (some people may be pleased to have been involved for example and be happy that their views were at least considered) and so on.

Comment on Activity 1.5

Most people (but you may be the exception that proves the rule) find it easier to think of programmed or routine decisions. This is probably because they are exemplified by organisational rules and procedures with which everyone in the organisation is familiar. One example may be following a designated procedure for dealing with clients, customers or members of the general public.

Perhaps, non-programmed or non-routine decisions are less easy to think of because most organisations now have comprehensive procedures which cover many of the possibilities which they are likely to face. However, these procedures may not always be easy to apply and even routine decisions may have non-routine aspects. The previous example of absenteeism may illustrate this. There may be procedural guidelines but they may not help a manager to decide exactly what action to take. Hence, this may be a new or unusual situation for a manager and the decision can be seen as non-programmed or non-routine.

Comment on Activity 1.6

Your response may well look very like the table which illustrates the stages of the rational model. In fact, this activity is designed to help you to become familiar with the rational decision making model. Your example may have made you realise that you may have skipped one or more stages. Your definition of the situation could, for example, have included the decision — ‘go on holiday in Florida’ for example.

Later on you will look at some of the problems associated with trying to follow all the steps of the rational model exactly as they are set out in the model.

Comment on Activity 1.7

The following is one of the first responses that came up when ‘rational decision making’ was entered into Google. (Remember search engines are constantly updating so things may be different for your search.)

It comes from a university in California (<http://cogsci.uwaterloo.ca/courses/Phil145/Phil145.Week9.html>) and gives the rational model as set out by Max Bazerman. The steps are:

- 1 Define the problem
- 2 Identify the criteria
- 3 Weight the criteria
- 4 Generate alternatives
- 5 Rate each alternative on each criterion
- 6 Compute the optimal decision — pick the action that maximises accomplishment of your goals.

This version includes setting criteria but as you can see the stages of it are effectively the same as the ones used above.

Comment on Activity 1.8

Your explanation will, of course, depend on the decision you chose. However, you may find that one problem was that the decision had to be made quickly, which may have meant that there was insufficient information available. Perhaps the information available turned out to be incorrect. Maybe few, if any alternatives were considered as the decision maker favoured a particular course of action from the beginning. Perhaps the person making

the decision was in a powerful position and was able to get her or his own way because of this.

One example of a decision which may fit some of the above is the decision by the British Government to participate in the invasion of Iraq in 2005. At the time it was justified by the apparent existence of weapons of mass destruction which Iraq was believed to possess. This information appears to have been incorrect as no evidence of these weapons has been found.

NB: You may well have your own views on whether this was a poor decision or not. Lack of information does not necessarily make it a poor decision. It does, however, provide an example of one of the potential problems of the rational decision making model. It also illustrates another aspect of the rational decision making model. Those seeking to justify the decision would claim that they had followed the rational model as best they could. If they did not do this, they could be accused of making an irrational decision.

Comment on Activity 1.9

The difficulties may be more valid for non-routine decisions. This is because routine decisions are ones that are made regularly. As a result, there has been time to clearly define the problem, gather information on available options and choose the best one. Information may well be up-to-date as these decisions are made regularly and any new information can be fed into the process. Information can often be processed electronically, which can be done quickly and means all relevant data can be used. Routine decisions are often made in conditions of greater certainty as the likely consequences of the decision have been learned over time and adjustments made accordingly.

It is for reasons like this that the rational decision making model is generally easier to apply to routine (or programmable) decisions.

Remember, though, that some routine decisions may well have non-routine aspects so that the difficulties may still be present in these situations.

Comment on Activity 1.10

This is a general activity which applies over the next few pages. It will be supplemented with some specific activities for particular alternative approaches.

But at this stage try to think about how realistic the alternatives are in terms of your experience.

Remember that the underlying notion is that following the rational model exactly is not possible but taking account of the framework may be.

Try to think too about which approaches seem most applicable to the work of managers in situations which you have experienced.

Comment on Activity 1.11

Your response will clearly depend on your own experience. Domestic or personal circumstances are often good sources of examples. One possibility could be that you have decided to buy a new car. However, you have agonised for some time over what type of car to get. Suddenly, for no obvious reason, you decide to go to a particular dealer. When you get there, you find something that seems to suit you perfectly.

You may have some kind of explanation as to why you had a flash of insight. If you haven't, don't feel that there's something wrong with you. Most people cannot explain why these happen.

Henry Mintzberg (1975), a well known writer on management, believes intuition is an important part of decision making. He says that flashes of insight are often things which people have developed unconsciously and which suddenly become conscious.

Comment on Activity 1.12

Most people do make use of intuition and emotion and you are likely to be the same.

Hence, there will be times when you can make decisions quickly and not be able to explain exactly why you have chosen to do what you do.

However, this can be dangerous and it may be worth considering how you can build in a continual checking mechanism to confirm that you have done the right thing.

Comment on Activity 1.13

Incrementalism is a low risk approach. If things don't work out it should be relatively easy to make a decision which involves another small step. It may, in fact, be going back to what was done before. It also works well when the overall end result isn't clear and where decisions may be controversial. People are usually much happier to accept small changes than big ones.

Incrementalism also draws attention to the different types of decisions. It may be particularly suitable, for instance, for tactical decisions designed to implement an over-arching strategy.

It is perhaps worth noting that one of Lindblom's books is called *The Science of Muddling Through*. Another benefit of incrementalism could be that it highlights that decision making can sometimes be a 'messy' process where the end result is not always clear.

Comment on Activity 1.14

There do seem to be some similarities between the two approaches such as:

- taking a small step may well represent making a decision which is satisfactory in the circumstances. It is a course of action which 'will do'
- both approaches highlight the fact that decisions are often made in circumstances which are uncertain and where it may not be possible to identify 'the best' course of action.

However, there may be differences between them:

- satisficing draws attention to the fact that the rational model may be something which any human being cannot follow — however intelligent or capable a decision maker, bounded rationality will apply
- satisficing does not necessarily mean that decisions will be based on a small movement from an existing situation. It is quite possible that what is considered a satisfactory option may involve quite considerable change and could be based on factors which are different from the existing situation.

Comment on Activity 1.15

Cyert and March claim that their view of organisations applies particularly to publicly funded organisations.

You may work in an organisation which has different geographical divisions or where operational activities are organised on a geographical basis. Alternatively, the organisations may have different departments to deal with different aspects of its work. Even with one department or one geographical area there may be sub-departments which have interests that are not the same as the department as a whole.

Each geographical division may decide for itself how to tackle what it has to do (local rationality). Did you think of an example?

These different decisions may not be the same but this may well be tolerated — perhaps by saying that it is the prerogative of each

local area to decide how best to tackle things (acceptable decision rules). Again, did you think of an example?

Occasionally, things may come to a head — eg the different decisions in different geographical areas may be reported in the national press and branded as unfair, as postcode lotteries, perhaps. In a police context, for example, people may be charged with offences which in other areas would not result in a charge.

One hospital may have shorter waiting lists for some operations than another because these types of operations are given a higher priority. These issues are resolved one at a time, eg in a hospital only the problems caused by a particular operation are considered and problems with others are temporarily ignored (sequential attention to goals). Again, did you identify an example — have you been involved personally in anything like this?

Comment on Activity 1.16

Here are a few things you may have thought of:

- problemistic search is very like incrementalism in that it starts with a known situation
- problemistic search is also like satisficing because once a suitable solution is found (presumably one that is satisfactory), then a decision is made and search stops
- uncertainty avoidance has echoes of Lindblom's (1959) idea that organisations 'muddle through'.

Cyert and March's approach is different in that it considers the organisational setting in which decisions take place. It confirms the theme of this Outcome that the rational model is not likely to be followed fully. It covers both process, political and organisational factors and is more comprehensive than the other alternatives considered so far.

However, it does not contradict the view that the rational model may provide an overall framework within which decisions can be made.

Don't forget to go back to Activity 1.10. From your own experience of working in organisations, how realistic are Cyert and March's ideas? How well do they fit in with the way decisions are made in your part of your organisation?

Comment on Activity 1.17

Most organisations have a lot of examples.

The chief executive may be able to use the power of her/his position to influence several aspects of decision making — which decisions will be made; what criteria will be used to evaluate any options; which options, if any, are to be considered and so on.

Some departments may have power because of their expert knowledge. This may enable them to bamboozle others who lack this expertise. This may be particularly important in gathering information about various options.

Comment on Activity 1.18

You may have found this quite difficult. The reason is that rules of thumb are so ingrained in the way an organisation works that insiders do not recognise them. It takes someone who is unfamiliar with the organisation to recognise them.

Rules of thumb are often used to make judgements about people. Success in a particular activity may, for example, be considered as a strong basis for promotion. This is an example of what is sometimes called ‘selective perception’ — which means that only some items of information are considered.

Comment on Activity 1.19

One common example is budgetary overruns based on an over optimistic forecast of what the costs for a project would be. Lavallo and Kahneman say that this is often the result of a rule of thumb that they call ‘anchoring’. Estimates for the costs of a project are based on (or anchored to) the initial proposals for the project. Although this seems to make sense, it ignores the fact that proposals for a project are usually optimistic. This is because the proposal is often designed to gather support for the project and is therefore presented in a positive way, which may play down possible difficulties.

Comment on Activity 1.20

This is a difficult activity so don't be surprised if you've struggled to find some examples.

Perhaps another example may help you to see the point. In some organisations, there is a culture of not challenging those in authority. This may mean that information on a decision reflects what those in authority wish to hear and not what is actually the

case. As a result, the steps of the rational model may not be followed exactly.

Comment on Activity 1.21

If you can think of examples, your organisation may have the garbage can of solutions, problems and so on.

Cohen, March and Olsen (1972) who suggested the garbage can model thought that universities and other publicly funded organisations were typical of ones where there would be uncertainty and confusion. This is largely because they may be required to follow conflicting goals which were not always clear in the first place and which often changed.

Public sector organisations in the UK for example may be required to adopt business principles but are still expected to offer a service to citizens. Their objectives may be unclear — schools for example may be seen by employers as the source of new employees while teachers may see their role as giving children a well rounded education. Publicly funded organisations may have to balance reductions in funding with demands to provide additional services. Government policy may change without warning.

All these factors may contribute to the situation envisaged by Cohen et al.

Comment on Activity 1.22

The main comment is to remind you about Activity 1.10 — can you recognise the garbage can model in your organisation and how may it affect your decision making?

Comment on Activity 1.23

Your response will depend on your own reactions to what was discussed.

However, you may, for example, have identified some or all of the following:

- decision making must take account of the power that people in organisations have
- for managers, it may be important to be seen to be taking action rather than thinking about what to do
- decision makers don't start with a blank sheet — they focus on what is happening at the moment
- decision makers may prefer small rather than large decisions.

Comment on Activity 1.24

You could have mentioned things like:

- intuition may be undependable (it may mean that people make decisions on the spur of the moment without stopping to check key information)
- over-optimism may lead to an incorrect assessment of the consequences of a decision
- relying on rules of thumb like what worked well last time may mean that critical new information is neglected
- making small changes may not always be suitable especially if radical change is needed
- deciding to do the first thing that comes to mind may mean that a better option is not considered.

NB: The above is just a small list — there are many other possibilities.

Comment on Activity 1.25

The first situation could be illustrated by cases where your manager has made a decision about what the team (of which you are a member) should do. You may be able to think of examples where there was quite a lot of consultation and some where there was very little, if any. If you can think of any examples, do you think consultation led to a better decision than where there was no consultation?

The second situation usually occurs where the team consists of people brought together because each has some special expertise or experience. Project teams are often like this and decisions are made by consensus. Again, if you do have experience of this, does consensus lead to better decisions do you think?

Comment on Activity 1.26

Your responses will obviously depend on which approaches you chose and what your example was.

However, suppose you had picked AI — an autocratic decision making approach.

You could have asked yourself the question in column A — was there a requirement such that one solution was likely to be more rational than another? You could then move to column D — was acceptance of the decision by team members critical to effective implementation?

If the answer to both is 'No', then the chances are that an autocratic approach by the team leader would have worked and the decision would have been a good one. Suppose, however, acceptance by team members was important. In this case, an autocratic decision making style may have led to problems. Team members may have tried to obstruct the decision in some way, perhaps.

Try to use the above to think about your own approach to decision making and how it might apply in teams that you have led or may have to lead.

Comment on Activity 1.27

Again your examples will depend on your own experience.

However, examples of groupthink can occur where one or two people (often in senior positions) get an idea which they believe is very important. They gather a group around them which soon develops a consensus that this idea must be implemented.

Any contradictory information or dissenting views are suppressed or are washed away by the wave of optimism surrounding the group.

Comment on Activity 2.1

It may be that all of them mean very little to you at the moment — although by the time you have finished this Outcome, things should have changed.

You may however, have come across ones like brainstorming, although it is now often called by a different name such as thought showering or boardblasting. SMART objectives and planning may also be familiar to you although perhaps from different contexts than decision making.

Comment on Activity 2.2

You may have found this quite difficult. Rich pictures are not easy if you are used to written statements.

Root definitions may look something like this:

The student welfare office provides advice and support to students who have personal difficulties including administrative problems with the College and other systems such as loan applications. The office is managed by the Senior Student Counsellor who reports to the Deputy Principal. Other staff are two Student Counsellors and a part-time Administrator. A majority of students never use the office. More than half of those who do visit do not return because they feel they are told what to do and not listened to. The office has a reputation of not being able to solve problems students have. Over the last two years funding for the office has fallen by 25%.

The critical point about the above is that it has been developed by looking at the situation. It is not the result of pre-conceptions.

Comment on Activity 2.3

Mind maps don't suit everyone. Try, if you can, to resist the temptation that this applies to you until you have given them a chance. Many people who have been sceptical at first have been converted by sticking with them.

If you like mind maps, you may find that you can use them as an alternative to SSM to create a picture of a complex situation where you have to make a decision on what to do.

Creating pictures does not always come naturally but it can help to give you a different perspective on a situation. It can also help you to sort out your ideas. This makes mind mapping particularly useful when looking at situations where there are a lot of relevant factors.

There are many other websites devoted to mind mapping so you may like to check out some of them.

Comment on Activity 2.4

The mind map is a summary and for this reason you may find it hard to follow because some of the detail is missing. However, if you had drawn it yourself you would be aware of what this detail is.

If you would like to know more about this look up [de Bono's website](#), or try to find some of his books.

Comment on Activity 2.5

Your example is likely to be an issue like the one above where a number of factors contribute to a particular issue.

In all probability, too, your diagram will be incomplete. However, it may be a very valuable starting point especially if it encourages you to think about the various factors which may be involved.

Sometimes an incomplete diagram makes a very helpful starting point to a discussion. You can start with your own version and ask others to work through it by asking why. This can provide support for your thoughts and also raise other possible reasons which may be important.

Comment on Activity 2.6

Did you find this helpful? It can be a good way of highlighting important causes of a problem and of clarifying what decisions need to be made.

There are other sites you can visit to look at fishbone diagrams including www.natpact.nhs.uk (another NHS site) www.mindtools.co.uk.

Comment on Activity 2.7

This is another activity where your response will depend on your own experience. However, you may have thought that a new approach has not been used because those concerned were wedded to old ideas (even though they have not worked). Perhaps, new suggestions have been made but have been 'put down' so that people felt there is no point in offering new ideas. Maybe the past experience of those involved (perhaps including yourself) has made it hard to think of anything new or there hasn't been time to think through possible new approaches.

Comment on Activity 2.8

The main benefit of boardblasting is that it can suggest decisions which are new and which can give a new way to address difficult situations. Rubber bullets, for example, are supposed to have been thought of in a boardblasting session where the question was presumably something like ‘How can we disperse aggressive and violent crowds effectively and quickly?’.

Boardblasting sessions can involve a number of people in the decision making process which can also be helpful, for example, in getting commitment to any decision which comes from the session.

Boardblasting may help you if you encounter situations where there is a complex problem which can be stated simply — for example, ‘How can petty vandalism be reduced?’.

Comment on Activity 2.9

Jane walked into an iron bar. The next two letters are J and J (June and July).

Both depend on the assumption that we will see things in a particular way, eg most sequences are based on some form of numerical relationship between the letters. This is what we expect and because different expectations are required we do not always see the explanation.

If you are interested in this you could follow it up by looking at Edward de Bono’s own site at:

www.EdwarddeBono.co.uk

You could also follow up some of Edward de Bono’s books. One is about the Six Thinking Hats mentioned earlier. It develops his ideas that there are different ways of thinking appropriate to different situations. By relying on one or two, particularly logical thinking, we are, in his view, limiting our own capacity.

Comment on Activity 2.10

Again, your response will depend on the situation you have chosen. However, it may well have shown that you can easily generate a range of options — even if not all would be practicable. One benefit of morphological analysis is that, like other techniques already considered, it can produce ideas for discussion which can help to see a situation in a new light.

Comment on Activity 2.11

The ‘Decision criteria’ table gives one example for going on holiday. It assumes that the intention is to go to a place which children will like. The criteria are how much it will cost, the chances of it being sunny, how long it takes to get there, novelty (ie whether it’s a place you haven’t been before) and whether there are a lot of things to do for the children.

Possible ratings have been included — but remember that these are subjective. Disney Florida scores low on novelty because it has been visited before, for example.

The decision criteria are subjective too — they depend on what the person concerned thinks is important in a holiday. In this example, Centre Parcs would be the choice.

The technique does help to highlight what factors are important in making a decision.

Comment on Activity 2.12

Like many of the techniques discussed in this Outcome, the usefulness of an evaluation matrix can depend on who uses it. Part of the skill in decision making is deciding which techniques are suitable for you and then using them. It isn’t possible to use them all (remember bounded rationality?) but it does make sense to develop a repertoire of techniques which can help you to increase your competence in decision making.

The evaluation matrix does have benefits in that it helps decision makers to go back to the criteria that a good decision should meet and to apply them in deciding what to do. It also sets out the various options in an easy-to-understand way.

It is subjective, as the rating and weighting depend on circumstances and individuals. But this is true of most decisions.

An evaluation matrix can be done by a group. Group members can discuss the relative importance of the various criteria and come to an agreement on the weighting of them. They can then score each option against the criteria individually and compare scores. A discussion of differences may help to pinpoint key factors and lead the group towards the option which is likely to be most suitable in the circumstances.

Maybe the next time you buy a new item of household equipment like a computer, you could try using the evaluation matrix. Among other things, it may help you to decide what the key criteria for making the decision are and how important each one is.

Comment on Activity 2.13

Your example may have illustrated the point made earlier that the various responses to the ‘how’ question can be categorised in different ways. You may have found too that you need to think of some of the answers to ‘how?’ before you can start drawing a diagram. Perhaps, too, you found you needed more than one attempt to get a coherent diagram.

All these are quite normal. The main benefit from them is that how-how can help you to identify the issues which you should bear in mind when choosing between options or when implementing a decision.

Comment on Activity 2.14

There are several possible explanations but you may have pointed out that implementing a decision is likely to be much more difficult if those affected by it do not accept it.

Your example may well illustrate some of the difficulties that can arise. If people do not like a decision they may find ways to obstruct its implementation. One very common way to do this is by various delaying tactics which postpone the implementation. If additional training is required, for example, people may find excuses not to attend. If a decision which people don’t like is implemented, they may find ways to get round it.

Comment on Activity 2.15

Neither example meets all the SMART criteria perfectly.

Example 1 is measurable (assuming that data on waiting times can be obtained) and is presumably achievable and realistic (if a suitable person is given the objective and is provided with sufficient resources). It is not very specific although ‘reduce’ is clear. It would be better if the amount of the reduction were specified. As written, reduce would be achieved if waiting times fell by 0.1 of a second. It may be better also if waiting times were clearer — does this mean average waiting time or waiting time for particular individuals or at particular times of the day? Objective 1 has no time scale.

Objective 2 is not specific (as it is unclear exactly what motivation means). It is not measurable (since this would depend on having a recognised way to measure motivation) and it, too, does not have a time scale. All these contribute to the fact that it is not achievable since there is no way of knowing whether motivation will have increased. It may be realistic (if it is given to the team leader) but

even then it is vague and it may be difficult for a team leader to affect motivation.

One way to resolve the problems of an objective like this is to relate it to specific activities. In this case, it could, perhaps, be something like:

Increase by 10% the number of cases processed per week by team members by 31 January.

You may like to check for yourself that this meets the SMART criteria.

Comment on Activity 2.16

Your responses will depend on your experience and the situations you chose.

It is likely (especially if the plan worked out well) that you followed the stages above at least to some extent. If things didn't go so well, it may be that you missed something out or didn't think things through enough. One common stumbling block is not checking that things are going to plan and finding out too late that something which should have happened has not been done.

Your own experience may also illustrate the point made earlier that the stages do provide a framework to structure the process of planning. In this sense they are like the rational decision making model.

Comment on Activity 2.17

Gantt charts are one of many planning and project management techniques. This activity can only give a very small 'taster' of them.

Remember that the message here is that planning — and setting objectives — are key aspects of making sure that a decision is implemented effectively.

Comment on Activity 2.18

Working out which box to put some stakeholders in can be a bit subjective. If you are in any doubt it is probably better to put them in a more rather than a less influential category.

Nevertheless, the technique is useful for highlighting which groups to pay attention to.

Comment on Activity 2.19

There is little to add to the above. They should give a good idea of how this technique can be used. You may, however, be able to find other examples by using your favourite search engine — be prepared for a lot of hits though!

If you are interested in finding out more about decision trees, you could consult <http://www.bized.co.uk/> or www.mindtools.com. If you do consult sources like this, you will find that decision trees can become very complicated and make use of quite advanced mathematics.

Comment on Activity 2.20

There are a number of reasons to question the choice of Campaign B.

One major factor is the extent to which the figures for the maximum and minimum impact are valid. They could be based on guesswork, for example. Also, the likely probabilities may not be accurate. Even if they are based on strong evidence of what has happened in the past, this may not reflect what will happen in this particular instance.

One way to test this is to assume different probabilities and re-do the calculation. Can you adjust the probabilities so that Campaign A becomes the favoured choice?

Another factor may be that the decision tree may not cover all relevant information. It is possible that this promotional campaign could be used as a test case for the new promotional methods, perhaps. It may be, also, that the organisation has an objective of trying to reach people who are not normally persuaded by promotional campaigns of this kind. Reasons like this may sway the decision towards Campaign A.

Comment on Activity 2.21

The most common uses of decision trees are:

(a) in situations like the NHS Incident Decision Tree — difficult situations which can be expected to occur but where each situation has its own unique aspects and to this extent is non-routine; decision trees can provide guidance on what decision to make in incidents like this. Vroom and Yetton's model is another example of how to deal with a predictable but possibly difficult situation.

(b) where it is possible to quantify aspects of the decision — decision trees can help to identify what is important in the decision.

Comment on Activity 2.22

You may well have found it hard to make a comparison especially if the costs or the benefits were a little vague.

If your decision, for example, was about introducing new working methods, there may be costs in terms of reduced co-operation among those who oppose the new arrangements. Even if the anticipated benefits are things like increased efficiency, it may not be easy to work out exactly what this will be.

Your example may have illustrated the value of cost benefit analysis in identifying key aspects of a decision which might otherwise be overlooked.

Comment on Activity 2.23

Your response will depend on what your organisation does.

Police forces in Scotland provide a number of examples of these 'rules'. One is SARA which stands for

Scanning (problem identification)

Analysis (details of the problem)

Response (take appropriate action)

Assessment (monitoring and evaluation).

Strictly speaking, this is a problem solving model but it can apply equally to decision making.

It is very similar to the steps of the rational model. This and 'rules' like it can form the basis of your decision making approach. It reinforces the point that your approach to decision making may well use the rational decision making model as a framework but recognise that it cannot be applied perfectly.

Comment on Activity 2.24

There is no right answer to this. It is typical of the decisions that hospitals have to make on a regular basis.

More important for decision making is how you reached your decision. The following questions may help you think about this.

Did you set up any criteria beforehand? If so what were they? And did you follow them?

Did you rely on gut reaction?

If you did set criteria, on what basis did you do this?

Did you look at all people equally? Perhaps you eliminated some very quickly and made your final choice from just one or two people? If you did this, what possible drawbacks might there be?

To what extent did you follow the rational model?

Did you find that you would have welcomed further information? If so what was it and how would it have helped?

Incidentally, this exercise lends itself well to using the evaluation matrix in section 2.3.

Comment on Activity 2.25

Your choice will obviously be a personal one.

Your justification may be that some will help you make better decisions than others.

If you think this then you can test it out. If you use a technique you can review the decision afterwards and see how the technique helped.

This kind of evaluation is the theme of Outcome 3.

Comment on Activity 3.1

As you have probably realised, evaluation is important in decision making for the same reasons that it is important in other contexts. Evaluating what has happened can help to identify what things went well and what aspects did go as well as expected. On the basis of an evaluation, it is possible to draw lessons for the future which may improve the way things are done.

In the case of decision making, evaluation can help to see how effective the decision was in producing a suitable outcome to the initial problem. It is important because it may help you to refine and develop your own approach to decision making. This, in turn, may help you develop your decision making capability.

Comment on Activity 3.2

As you probably recognised, evaluation should really occur after every decision. However, time and other constraints may make this difficult, especially if things did not work out as expected.

For this reason, evaluation tends to be more likely when decisions seem not to have worked.

It is understandable that this should be the case. However, remember that you can benefit from evaluating good decisions too. So try to find time to do this — you can learn from this too.

Comment on Activity 3.3

You may have found that there are other aspects of the rational decision making model which were not met. On the other hand you may have been satisfied with the explanations given in the table.

The important point is whether the explanations do help to explain why this can be seen as a bad decision.

Making a comparison with the rational model helps to show that it can be valuable to think of other options even if doing nothing is one of them. It helps also to provide a check on the decision just to make sure that decision makers don't rush ahead and throw caution to the winds.

Comment on Activity 3.4

You may have found that the above merely reinforces your responses to Activity 1.6, or more likely, Activity 1.8.

The crucial thing is to think about what the comparison tells you about the decision. To what extent does it help you to explain why a good decision worked or a bad decision did not?

Comment on Activity 3.5

You may have been able to add other possible explanations. Perhaps, for example, you thought of Cyert and March's problemistic search. Merck had a problem and they looked for a solution close to the problem — this led to the decision to keep selling Vioxx as this would address the issue.

The alternatives do help to explain why Merck acted in the way that it did. They suggest for example that it was perhaps unreasonable for Merck to consider a lot of alternatives and that any decision was unlikely to be a big departure from what the company had done previously.

However, the alternatives also reinforce some of the potential problems. In a case like this, gathering information on available options may be critical. Equally, it may be important to think about the criteria for the decision — should profits come before safety for example?

Comment on Activity 3.6

This isn't an easy activity and you may have found it hard to find many examples.

Its purpose is to help you review your conclusions to Activity 3.4. In this way you can strengthen your evaluation. It may be that like the examples in the text, you have reinforced your original thoughts. On the other hand, you may have modified them a little.

One example of this could be an organisational rule of thumb. If this was used and it turned out badly, it is hard to blame those involved in making the decision. There may, however, be a broader lesson that this rule of thumb should be reconsidered and, perhaps, abandoned.

Comment on Activity 3.7

Your response will, as before, depend on the decision you have chosen.

However, you may have had some of the following ideas on time:

- a relatively minor decision may have taken a disproportionately long time to make
- alternatively, an important decision may have been made quickly without consultation.

In both cases there may have been resentment and frustration as a result.

In terms of cost, you may have thought of things like:

- a decision which worked out well because money was spent in gathering information (buying new equipment after visits to existing users perhaps)
- similarly, a good decision may have been the result of making sure of existing experience and knowledge and not spending money gathering information from elsewhere.

The above also illustrates how time and cost overlap. It also returns to the cost benefit analysis of section 2.5. The process of making a decision may have been costly and time consuming but the result was well worth the effort.

Comment on Activity 3.8

Your response will depend, of course, on the decision you chose.

However, you may have realised that the criteria you selected were closely related to the criteria for the decision itself. To illustrate this, think about the holiday example in Activity 2.11.

If sunshine was a key criterion for your holiday, your evaluation of your decision is likely to include a criterion based on the amount of sunshine there was during the holiday. This is a specific example of the general criterion above of effectiveness — how well did the holiday meet its intended purpose.

Suppose that cost was not a major factor in your decision about where to go on holiday. If this was the case, then cost is unlikely to be a criterion for evaluating the decision. Whether or not the decision was a good one does not depend on how much the holiday cost.

Comment on Activity 3.9

Your response will depend on the criteria you chose to evaluate the decision. Ideally, your strengths and weaknesses should follow directly from this.

Your strengths and weaknesses may cover both the process of decision making and the decision itself. They may well also illustrate the points above.

For example, going back to the holiday example, you may have decided that the process of decision making was a strength — for example you looked at suitable options and made a careful choice

between them. However, the decision itself may have had weaknesses — for example your accommodation was not as you had expected. This may have been because the information that you used from the holiday company proved to be inaccurate although you did not know that at the time.

Comment on Activity 3.10

One possible example could come from the holiday decision.

Suppose, in fact, that the accommodation was not as you expected and that the reason was the poor information received from the holiday company.

You may draw the lesson that in future you will not rely on what holiday companies say. You will follow the same decision making process and consider available information when deciding where to go. However, you may seek this information from other sources — for example friends who have been before; travel guides; internet searches and so on.

Comment on Activity 3.11

This is a very personal question and the only answer is what you think just now.

However, you may well find that your approach is based on the framework of the rational model, that is:

- clarify the situation
- identify your option(s)
- get information on the option(s)
- choose the best one (or confirm that your option will work)
- implement the chosen option.

While your basic approach may not change much over time, your effectiveness at using it may, especially if you take time to evaluate your approach.

People, especially managers, who make good decisions usually win the respect of others.

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NB The above covers most of the material referred to in the text. It includes two well-known management textbooks. They are:

Buchanan, D. and Huczynski, A. *Organisational Behaviour*

Mullins, L. *Management and Organisational Behaviour*

Both are readily available and provide useful further reading.

Websites

<http://cogsci.uwaterloo.ca/courses/phil145.html>

www.12manage.com

www.bized.co.uk

www.brainstorming.co.uk

www.businesballs.com

www.EdwarddeBono.co.uk

<http://en.wikipedia.org>

www.moneymadeclear.fsa.gov.uk/tools/stakeholder_pensions/notes_index.html

www.ganttchart.com

www.mind-mapping.co.uk

www.mindtools.com

www.MyWiseOwl.com

www.natpact.nhs.uk

www.npsa.nhs.uk/nrls/improvingpatientsafety/patient-safety-tools-and-guidance/incidentdecisiontree/

www.thepensionsregulator.gov.uk/stakeholderPensions/decisionTree/index.aspx

www.tin.nhs.uk

www.valuebasedmanagement.net

The above list covers all the websites specifically mentioned in this support material. It also includes other general sites which include information on decision making.

There are many others which have useful ideas, material and exercises. One way to find out which ones could be relevant is to use Google or another search engine and type in the appropriate theory, model or concept. But remember that many of the concepts are well-known and that as a result you can be swamped by the results.