3 IMPROVING YOUR STUDY SKILLS

A WHAT ARE STUDY SKILLS?

Study skills are simply the various skills you need to be able to study efficiently. Many people have surprisingly poor study skills. Merely attempting to learn facts and recite them parrot-fashion isn't enough. This chapter deals with how to improve your ability to study. It does this by identifying a number of skills and looking at them one at a time.

ACTIVITY 1

- 1. Spend 15-30 minutes reviewing Chapters 1 and 2 of this book.
- 2. Make a list of any skills mentioned that you think will help you to study more effectively.
- 3. Write down any other skills you know of that may be study skills.
- 4. As you read through the rest of Section A of this chapter, compare your list with the list of study skills given in the text.



Oxford Open Learning students have an advantage over students who are totally dependent on textbooks. This is because all Oxford Open Learning study packs offer advice on how to develop your study skills. This advice is accompanied by activities tailored to the subject you are working on. This ensures that if you work through the activities carefully you will become more familiar with the topics of your course, and also improve your study skills.

Here is an example. The first module of the 'A' level Biology study pack is called 'Levels of Organisation'. This module focuses on a particular study skill (see *Classification* below) which forms one of the cornerstones of Biology. Classification depends on comparing and contrasting items. If you don't know how to compare and contrast ideas, objects, or organisms, you won't be able to develop a system for classifying them.

Not every subject requires exactly the same techniques, but we can identify a list of core skills that are common to most subjects. Without these skills successful study would be difficult or impossible. I have arranged them into two groups, headed *Receptive Skills* and *Productive Skills*, although there is some overlap between the two categories.

Receptive skills

- skimming
- scanning
- using abbreviations
- making notes
- taking notes
- summarising
- understanding classification



- recognising different kinds of text
- reference skills
- using the media in a discerning way

Productive skills

- brainstorming, mind-maps and planning an assignment
- breaking up large tasks into smaller units
- recycling your studies
- solving problems
- improving your memory
- making inferences
- translating information from one form into another
- empathising
- assessing your own progress

ACTIVITY 2

- 1. What do the two terms receptive and productive mean?
- 2. If you don't know the answer, how can you find out?
- 3. What do you think is the main difference between *receptive* and *productive* skills?
- 4. Can you identify any overlaps between the two lists above?
- 5. In other words, which of the above skills involve both receptive and productive aspects?



B RECEPTIVE STUDY SKILLS

These skills are largely *receptive* skills. That is, they deal with acquiring and processing new information.

Skimming

Skimming consists of reading rapidly to get an overview; when skimming you don't read every word. Instead you look at introductory pages, titles, headings and any pictures or diagrams for clues about the contents and how the text is structured. You might glance at parts of the main text but would not read it in detail (see Chapter 2, Section C).

ACTIVITY 3

You need a newspaper that you have not looked at, or an old one that you have not read recently. You also need a watch or clock.

Read the instructions below before you begin. Don't worry if this activity seems difficult. Most people do not absorb information quickly, which is why we need to practice skimming. For example, I just spent five minutes skimming a page from *The Oxford Times*. Of twelve news stories, I could only recall a few words about each of four of them. The rest were a complete blank!

- 1. Open the newspaper at a page on which there are several news stories.
- 2. Spend exactly five minutes *skimming* this page.
- 3. Do not write anything down yet.
- 4. During this time, read the headlines and look at any accompanying photos.
- 5. Briefly look at any other illustrations or additional material on the page.



- 6. Next, *skim* through the articles looking for key words. (This means looking quickly down the columns of print.)
- 7. Remember: you will not have time to read any of the articles in detail.
- 8. After exactly five minutes, close the newspaper so that you cannot see the page you have been skimming. (There's no point in cheating. This is not a test!)
- 9. Now answer the questions numbered 10-13 below. Don't worry if you can't remember much.
- 10. How many articles appeared on the newspaper page?
- 11. Write no more than five words about each article.
- 12. Write brief notes on any photos you noticed.
- 13. What else was on the page besides news articles and press photos?
- 14. Now open the newspaper page again and check how you did.

If you're as bad as I am at this skill, you'll need plenty of practice. Try Activity 3 every day for a week, using different texts, and you will improve. The skill of skimming is related to skills such as *summarising* and *improving your memory*, so you could also check the information on summarising and improving your memory below.

ACTIVITY 4

1. Skim through Chapter 5 of this book. Allow yourself exactly five minutes to do this.

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- 2. Without referring to the text, what is Chapter 5 about?
- 3. How many sections is Chapter 5 divided into?
- 4. What is the topic of each section?
- 5. How many activities are there in Chapter 5?
- 6. Which section do you think will be most useful to you?
- 7. Why?
- 8. Check back to Chapter 5. If you were unable to answer the questions correctly, do the same activity for Chapter 6.

Scanning

Unlike skimming, which provides an overview of a text, scanning sets out to look for specific details. For example, if you wanted to buy a second-hand car, you would scan the relevant column of your local paper. Scanning means looking quickly at a lot of text in search of particular information.

ACTIVITY 5

- 1. Find the television page for any weekday in any newspaper.
- 2. Look for the five main national broadcasters.
- 3. Don't bother about satellite or cable TV.
- 4. Spend exactly two minutes *scanning* the listings, looking for all sports programmes
- 5. Afterwards, go back to see if you missed any.



6. If you want further practice, try the same exercise with a different day's TV page. This time, scan for movies.

Using abbreviations

Several study skills depend upon the ability to use abbreviations effectively. When *making* notes (from a text in front of you), abbreviations help you to summarise information in a small space. This is immensely useful when you start your revision programme.

When *taking* notes (while listening to someone speaking), abbreviations are even more useful. Some students try to write down everything the lecturer or broadcaster is saying. This is impossible! These days few people learn shorthand (if you do know shorthand, use it!), so we need to use abbreviations. Many of these are standard, but you will find it helpful to invent your own. Here is a list of well-established abbreviations:

1.	1, ,,
alt.	alternative
approx.	approximately
a.s.a.p.	as soon as possible
C	century
c.	approximately
cd	could
cf.	compare
cont'd	continued
exc.	except
e.g.	for example
esp.	especially
et al.	and others
et seq.	and what follows



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ff. following pages

fr. from

ibid. in the same work as quoted above

inc. including i.e. that is info information i.r.o. in respect of no.

op. cit. in the work quoted

opp. opposite p. page pp. pages q.v. see

re: with reference to

shd should usu. usually v. very vs against namely viz. wd would which wh. without w/o your yr + and & and equals

doesn't equalless thanmore than

// parallel, similar or equivalent to

 $\begin{array}{cc} \therefore & \text{therefore} \\ \Theta & \text{because} \end{array}$

 \cong approximately equal to



\rightarrow	it follows that
←	results from, depends upon
#	space

Acronyms such as BBC, UFO, UNESCO are also useful abbreviations. When writing history notes, for example, it is quicker to write 'WW2' than 'World War 2' or 'The Second World War'. Some dictionaries include lists of common acronyms and abbreviations.

Making notes

By *making notes* I'm referring to writing notes on what you are reading. Notes are a way of summarising information and a way of remembering it. Notes are not complete sentences, but words, phrases and abbreviations, usually arranged as a list. Your notes are mainly for *your* benefit, not for other people's, and are therefore a personal matter.

Your notes should, however, be clearly written and easy to make sense of later. There may be a gap of weeks or months between making notes and referring to them. So it's best to leave plenty of space around your pages of notes to make them easy to read.

The study skill *making notes* is closely connected with the following study skills (see below): taking notes, using abbreviations, summarising, improving your memory.

ACTIVITY 6

This activity asks you to compare the note-making skills of three Oxford Open Learning students, and then decide which notes are the most effective.

1. First, read through the following short extract, entitled 'The Product Life Cycle', which is taken from the GCSE



Business Studies study pack. The notes that follow are based on this extract:

Marketing executives tend to think of products and particular brands as though they had a life of their own. It is as if they are born, go through various stages similar to those of human development, and eventually die.

As babies and small children, we require a great deal of looking after and we cannot repay the investment that is put into us. It is the same with a new product. A great deal of money must be spent in research, product development, and initial advertising before the business begins to see a return on its investment. When the product reaches its intended market, there will be a period (like an apprenticeship, perhaps) when costs are balanced by revenue and eventually, when the product is established, it should make a profit. Now that it is "mature", it can support other developing products.

But its earning power will not last for ever. One day no one will want to buy it any more and it would be a waste of money to continue advertising it. So, in its "old age", the product may still be available but it is no longer actively promoted. Eventually, it must be withdrawn altogether.

It is important to know whereabouts a product is in its life cycle. This will have an effect on the amount of promotion that is organised and perhaps also on the planning of production. There is no use building a bigger factory if a product's sales are just about to go into an unavoidable decline.



2. Now look closely at the note-making attempts of the three students:

Michele's notes

Mkt execs think of pross + brands as if alive.

Mhuman: born > devu > die.

Babier reg. much attn + can't repay investment.

Mnew prob: fff spent on research, devu + ads next period // apprentshy when costs = revenue.

> mature prod > profit + supp other devu prods.

Next period = prod's old age. Few or no more solver.

No pt adu dd prod.

Final stage: prod withdrawn.

Must know where raw prod is in life cycle.

> ant of promo + production plans.

No pt blog bisser factory for prod abt to decline.

Daniel's notes

Me think ps and pbs as though life of own

As bost sms, we rea good they aft and we can't rpy inve pe into us.

Same new p. Gt dl mny mst spt rach p dev and in ad bbb see the on in.

klhen proh mkt, p like app costs ball rev t even when est sha make p. Now mat can supp oith dev ps.

Earn pow nt 1st fizi. One day no one with buy the Wish may come ad it.

OLD age p ava but no log act p. Evnt w/dawnatt

Imp knu where p is in life cyc. Efch amt poigtp onptp.

No use bidg by fotry if ps sis abitings into unaval diect.



Saralis notes

product // life: birth -> death

- a) new prod: costs, so return
- 'apprentieship': costs = revenue
- "mature": profit
 prod. "dies": no profit withdraw

need to know where prod. is in life cycle

- How easy or difficult is each set of notes to understand? 3.
- How concise is each set of notes?
- 5. Now read the extract again.
- 6. Look through the three sets of notes again.
- 7. Think about the differences among them.
- 8. Which set of notes is the most effective, and why?

ACTIVITY 7

- Choose any page from your study pack that you have not yet studied in detail.
- 2. It's a good idea to choose a page from the module that you are currently studying.
- The page should be all or mostly text. 3.
- The page should also be as self-contained, i.e. as complete in itself, as possible.
- Read through the page carefully.
- Make notes from the page, being as brief as possible, without omitting any of the main points.
- sure 7. Make any abbreviations are clear unambiguous.



- 8. When you have finished, close your study pack so that you cannot see the page from which you have made notes.
- 9. Now try to write out the page based on your notes.
- 10. When you have done this, open the study pack again.
- 11. Check your attempt against the original page of the study pack.

It doesn't matter if your phrasing is different from the original, but check carefully that you have covered the main points.

Taking notes



In this book we distinguish between *making* notes and *taking* notes. Here, *making* notes means writing notes from written information: you have a book or study pack in front of you, and you have time to refer back to the text if you need to.



The phrase *taking* notes, on the other hand, means writing notes as you listen to someone speaking. This may be in a 'live' lecture or class, or while listening to a radio programme or watching TV. You may also need to write down points while someone (such as your tutor) speaks to you on the telephone.

While *making* notes is a relatively leisurely activity, *taking* notes is more pressured, because there is usually no opportunity to listen to the information again (unless you are listening to a recording). Taking notes is therefore more difficult than making notes, requiring you to listen for relevance and summarise what you hear *as* you write it down.

ACTIVITY 8

You need a radio cassette recorder (or a video recorder) for this activity. You also need a suitable cassette with at least ten minutes of blank tape. If you don't have a radio cassette player or a video recorder, try the alternative version of this activity below. Read all the instructions before you start.

- Tune in to a radio or television station a few minutes before a news broadcast. (Choose another kind of programme if you want to, but it must be informationbased. A documentary would be suitable, but *X Factor* would not! The broadcast should be at least five minutes long.
- 2. Start recording about a minute before the broadcast is due to begin.
- 3. Sit comfortably with pen and paper and take notes.
- 4. Do not try to write down everything: include only the main points.



- 5. Use your abbreviation skills as practised above.
- 6. When the broadcast is over, stop the tape.
- 7. Look at your notes while they are still fresh in your mind. Make any changes or additions you want to.
- 8. Rewind the tape to the beginning of the broadcast.
- 9. Play back the recording, checking your notes as you go along.
- 10. Press the pause button if you need to stop and think about anything.

If you are not happy about your note-taking skills, try this activity again, using a different broadcast.

ACTIVITY 8 (ALTERNATIVE VERSION)

- 1. Follow the instructions for the activity above, but instead of using a tape or video machine, ask someone to help you.
- 2. Ask the person to read aloud a news story from a newspaper, or a page from your study pack, or textbook.
- 3. The material should be unfamiliar to you.
- 4. The person should read clearly and at a normal speaking speed, as if giving a lecture or reading the news.
- 5. Do not interrupt their reading.
- 6. While the person is speaking, take notes, using the skills you have practised under *Using abbreviations* and *Making notes* above.



- 7. When the person has finished speaking, allow yourself a few minutes to check your notes. Add any details you think are important and clarify what you have already written.
- 8. Now look at the reading text.
- 9. Compare the text with your notes.

If you don't feel that you are very good at note-taking, try the activity again a day or two later, using a different text.

Summarising

The skills you have been practising in this chapter are useful when *summarising*. Indeed, notes are a form of summary. Most of your efforts to record information should be in note form. Sometimes, however, you will need to write up a summary in complete sentences. Some syllabuses formally test this skill in the examination.

In coursework, controlled assessment or project work, you may have to summarise the results of an experiment, the arguments of a thinker, or perhaps the plot of a novel.



ACTIVITY 9

This informal activity practises a combination of *Using abbreviations*, *Taking notes* and *Summarising*.

- Take notes on the main events of an episode of your favourite soap opera, drama series or situation comedy.
- 2. Do this while the show is being broadcast.
- 3. When the show is over, work your notes up into a summary.

Recognising different kinds of text

This is a question of what language is appropriate in a particular situation. Sometimes it's just a question of which words to choose. 'Your company is requested at...' and 'Please come to a party at...' mean more-or-less the same thing, but they are used on quite different occasions. The first is formal, and uses a passive verb. The second is informal, and uses an active verb.

Science generally prefers the passive voice, because it suggests formality and objectivity. If you say 'We did this' and 'We did that', it implies that someone else might have done it differently. But phrases like 'This was done' and That was done' imply that you followed an agreed procedure, and that any experimenter would have done the experiment in the same way.

Look at these examples of highly *inappropriate* use of language:



Dear Mr Higginbotton,

re: the intimacy of our relationship

I am writing to inform you that my fedings towards you have recently become more serious. I thus your request your company next Priday evening. I have pursuased two tickets for the 9.00 showing of Titanic at the local Astoria cinema. Please inform me in writing not later than Tuesday as to whether or not you will be available.

I look forward to seeing you.

Yours sinceruy,

Helen Impoer.

Dear Phil

I just can't cope with my overtrift limit. I need to borrow huch made madey. I'd be teally chuffed if you could dig it your portects and come up with another five grand or so, otherwise me and my family will never make it through till chieftures.

Thank a lot.

Love

Bopper

a science report.

hast Tuesday Journe and I took a bottle of distilled water and threwarmhole load of sact into it. Then we stirred it up with a small thing a bit like a spoon. We had to heat the water up for a While to get all the salt to dissolve. Then we heated the water more Strongly until it started to boil. In fact, we carried on boiling the water until we could see some of the Salt again. Eventually all the water boiled away and we were left with just the sait. Oh, I forgot to heat on that at the end of the boiling process we had to show down the healing to avoid burning the sact. That's all!



ACTIVITY 10

Choose any one of the three examples on pages 68 and 69 and rewrite it in more suitable language.

Reference skills

Reference skills include the ability to use the following:

- chapter headings
- contents pages
- database
- dictionary
- encyclopaedia
- index
- library catalogue
- thesaurus

It's essential that you can use all these items. The Internet also offers millions of pages of information, available to anyone who has access to the worldwide web.

You also need to be able to use a library. If you want help, ask a librarian. That's what they are employed for: to help the public, especially students.

Most public libraries in the UK are well organised and staffed by competent, helpful librarians. They should be able to tell you everything you need to know about your library.

If you go to your library to look for a specific book, don't necessarily expect to find it immediately. The book may have been borrowed, in which case you will have to reserve it. Or it may only be available on inter-library loan from another



library. It may then be a week or two before the book you need is in your hands.



For these reasons, *never* leave your library visits until the day before your assignment is due. You should *always* identify the information you need early on, at the planning stage. Make your enquiries at the library with plenty of time to spare.

ACTIVITY 11

- 1. Choose any author, book, topic or key word with which you are having difficulty.
- 2. Go to your library and use all available means to find out everything you can about your chosen author or topic in one hour.

Ask a librarian to help you if necessary.



Using the media

This skill is a reference skill. We are bombarded with information all day long - on TV, on the radio, on our way to work. How do we sort out the useful from the useless?

You might think this is easy. If you like beer, you'll pay attention to ads for beer and ignore the others. If you're a chocolate addict, you'll respond to chocolate ads. But there is simply so much information firing at us from all sides, that we get overloaded. We need to filter out the useless information without blunting our senses altogether. Otherwise we will miss some of the useful information too.

Here's an example. Recently I was thinking about the subsection below on *Improving your memory*. So far I had only scribbled a few notes. Then it was lunchtime.

The local Midlands news was on TV. I wasn't paying attention because I was still thinking about memory. Then I noticed that the news story was about a man who had an excellent memory! Of course, I started listening, but I'd already missed the beginning of the story.

The man was a Midlands taxi driver who could remember vast amounts of information. I'll tell you more about his technique under *Improving your memory* below. For now, the point is this. I had decided not to listen to the news, thinking it wouldn't be relevant. Because of that, I'd almost missed a chance to learn something new that could enrich my work.

There's plenty of educational material on radio and TV if you look for it. Last night I watched a fascinating Open University programme about the Romans in Britain. At the end the narrator offered a free information pack to anyone who wrote to the address given or telephoned a freephone number. It's worth being aware of such opportunities to supplement your studies!



Most educational programmes are transmitted during the night. Although suitable for all students, they are particularly good news for home learners, as they keep you in touch with the world beyond your study pack.

You would be well-advised to get in the habit of checking the TV listings every day and videoing any programmes that look as though they might be relevant. You can tape over such programmes once you have viewed or skimmed through them. Of course, if you don't have access to a DVD (or VCR) recorder, you may have to stay up late to watch relevant programmes at the time of broadcast, but this is not really to be recommended.

ACTIVITY 12

- 1. Get an up to date magazine or weekend newspaper which lists a whole week of TV and radio programmes.
- 2. Look carefully through the programme listings.
- 3. Mark programmes that look relevant to your studies.
- 4. Watch or listen to as many of these programmes as you can, making notes on their usefulness.
- 5. *Scan* the paper for articles relevant to your subject.

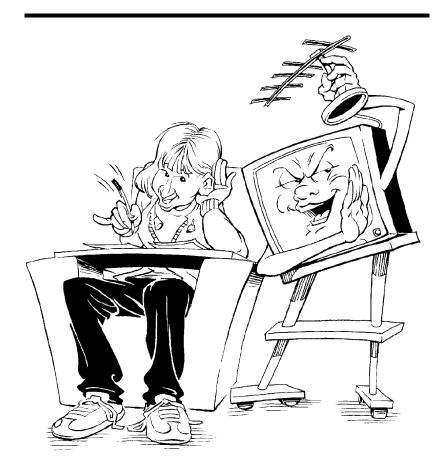
ACTIVITY 13

Go to your newsagent and look for any publications that are relevant to your studies. Make a note of the titles. Look for these in your library.



ACTIVITY 14

Go to your local library and find an educational video or DVD that is relevant to your subject of study.

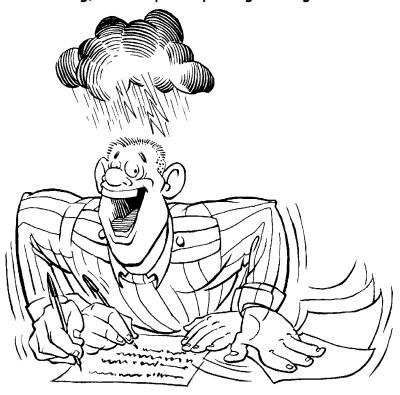




C PRODUCTIVE STUDY SKILLS

Productive skills deal with how you plan and present your own ideas, based on information that you have already worked through.

Brainstorming, mind-maps and planning an assignment



Mind-maps and spider diagrams are names for two techniques that are very similar. To save space, I will refer to mind-maps only from now on.



Brainstorming is what happens immediately before you produce a mind-map. As the name suggests, brainstorming is creative (often chaotic) thinking. For many people, mind-maps are the best way of getting the brainstorm down on paper.

Ideas do not usually arrive fully-formed or in the best sequence. Some people lose their moments of genius because the ideas they have don't seem to fit into their plan. But at the beginning it's best to scribble down whatever comes into your head, as long as it has *some* relevance to the topic.

Spread your ideas out over the page, using lines or arrows to make connections. Because mind-maps are arranged *spatially* instead of in a *linear* way, the links between ideas are not final. You can always rearrange the order, or the emphasis, later.

Page 76 shows an example of a mind-map made during a brainstorming session. The example topic is a GCSE English question on Shakespeare's play, *Macbeth*: "To what extent is Macbeth responsible for his own downfall?"

(Note that normally a literary essay must include clear references to the text in question. To save space, I have omitted these here.)

Once you have a mind-map in which the connections among ideas are clearly shown, you can begin to *plan* your essay. This involves restructuring your notes in a *linear* way, so that your ideas are presented in a suitable sequence. Generally, you would open with an introductory paragraph and end with a conclusion, which sums up what you have argued.

To what extent is Marbeth responsible for his own downfall? (mind-map) fate, destry, freendl = key question in which tragely: M. fails lest: to resist temptation How for is Madelth a free Supernatural Lady M. persuades him her fale = indien + death Witches: M+B's 1st neeting (Woman writingly in league with witches?) seems to then coincidence, but witches draw them to cave. Witches thou M+B the future M's loss of coulool - witches' (desting). Propheries: In shall Image of sea captain lost at sea. Le king (seeds of antition); Bis descendants will be kings. loyalty prenons There Brilan Wood, soman of us to Marbett (Macduff) Ato Scotland L to Halcolm fractors execution dotting imagery temptation vs opportunity dagger = illumin = audition B's ghost: quilt, accusation good of all vs personal advancement



ACTIVITY 15

- 1. Choose a topic that you have already studied but have not yet written about.
- 2. Brainstorm your ideas.
- 3. Write down anything you think is relevant, spreading your ideas over the page.
- 4. Look at your notes and draw lines connecting any ideas that are related.
- 5. Finally, set out your notes in a linear way in the order in which you want to present them.
- 6. Write the assignment based on your plan.

Breaking up large tasks into smaller units

We looked at this skill briefly in Chapters 1 and 2. You can apply it to any situation in which a big, daunting task is worrying you. Simply divide the task into smaller units and tackle the problem a piece at a time. Spread the units of work over a period of hours, days or weeks, depending on the time scale. Build these sessions into your regular study plan.

This skill is useful if you have to write a long assignment for your coursework, or if you need to schedule a project over several weeks or months. I've used it extensively when planning this book.

Your studies are already organised for you into manageable units. Your syllabus is divided into topics and sub-topics. And a good home study pack will be structured



so that you can work through it lesson by lesson, at your own pace. Self-assessment tests (SATs) and tutor-marked assignments (TMAs) are placed at intervals throughout the course to enable you and your tutor to measure your progress with confidence and accuracy.

ACTIVITY 16

Imagine you have won the National Lottery.

You decide to buy a plot of land where you will design and build your dream home.

Obviously, you can't do this overnight.

List the steps you will take to see this project through, from the first idea to the finished home.

Recycling your studies

Don't bore yourself to death with endless repetition. There are better ways of remembering one section of your studies when you proceed to the next. Build into your study plan regular opportunities to review your work. The aim is to renew your interest and clarify your understanding, not kill off both altogether.

Syllabuses tend to start with the simpler material and move on to the more advanced. But this applies more to some subjects that others. Science subjects and foreign languages, for example, tend to advance in complexity from one topic to another, whereas subjects such as History or Law may deal with a range of related topics of more-or-less equal difficulty.



From the beginning, build some time into your Study Plan to allow you to develop the skill of *recycling* (see Section C of Chapter 2, and Chapter 5).

ACTIVITY 17

- 1. Choose a topic that you studied some time ago, preferably one that you cannot remember much about.
- 2. Carefully read through your notes on this topic.
- 3. Spend half an hour skimming through the course material that relates to the topic.
- 4. Decide which parts of this topic need the most revision (see Chapter 2, Section C).
- 5. Build your revision of this topic into your Study Plan over the next two weeks (see Chapter 2, Section B).

Solving problems

We all need problem-solving skills regardless of what subjects we are studying, and even if we are not studying at all. This is especially true of problems for which we are unprepared and which therefore require creative solutions.

The most efficient problem-solvers use techniques such as brainstorming and *lateral thinking* to tackle new situations. Edward de Bono (who introduced the term *lateral thinking*) also suggested the term *provocation* as a way of jolting our minds into seeing problems in a new way. These approaches give us the freedom to take a new idea and see where it goes.





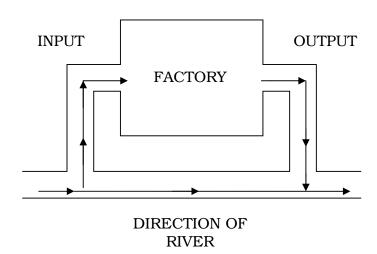
New ideas often get a hostile reception at first. The person who invented the safety razor was ridiculed by the so-called experts. They said the metal he wanted to use would break because it was too thin. But he went ahead and made the razor anyway, and now nobody uses the

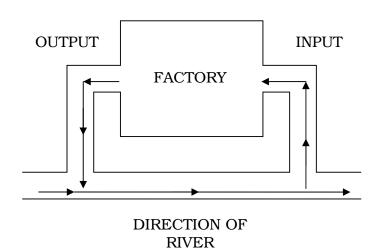
old-style cut-throat razor, which was as dangerous as its name suggests!

In a recent radio interview, Edward de Bono gave an example of *provocation* as a way of *opening up* a problem.

The problem was as follows. Factories that require a lot of water for their processes are often built near a river. They draw clean water from upstream, and pump polluted water back into the river downstream of the site. How can we prevent factories from polluting our rivers?

The government could pass strict laws, but some factories may ignore them, and monitoring factories may be expensive. Is there any way of persuading factories to monitor their own water usage, and thus reduce levels of pollution? (Try comparing the two diagrams on the next page.)







Here de Bono introduces his provocation, which is this apparently nonsensical statement: to persuade the factory to control water pollution, the factory must be *downstream of itself*. How can a factory be downstream of itself? Surely this is impossible!

Not at all: you can insist that the factory simply reverses its points of input and output. In other words, it pumps the water it needs from downstream, and returns to the river the water it has used *upstream* of itself.

Assuming that the factory needs a source of clean water to run its processes, this arrangement will force the factory to regulate its own water usage, thus minimising pollution. The solution is remarkably simple.

To sum up, most thinking occurs within an established frame of reference. We need a frame of reference to be able to think at all. But sometimes we miss possibilities because our view of things is too narrow. Lateral thinking allows us to step outside the frame and see things from a fresh perspective.

Improving your memory





There are many ways of doing this, such as using mnemonics, visualisation, and narratisation. You can also use symbols, charts and diagrams. Most of us make little use of our memory. A lot of research has been conducted into memory over the past few decades. It is now well established that developing your memory is largely a question of training.

Let's look at mnemonics first. A mnemonic is a way of making information memorable by turning initials into a kind of story. Some examples are probably familiar to you. If you want to remember the colours of the rainbow, you may have learned the sentence 'Richard of York gave battle in vain.' The first letter of each word represents a colour in the sequence:

R	red
O	orange
Y	yellow
G	green
В	blue
I	indigo
V	violet

It doesn't matter how ridiculous a mnemonic is: in fact, the silliness makes it easier to remember. It just occurred to me that 'mnemonic' is a difficult word to spell. So here's a mnemonic to remember how to spell the word 'mnemonic':

'Most neurologists eat marshmallow or nougat in Croydon.'



ACTIVITY 18

- Find three words that you often have difficulty spelling correctly.
- 2. Invent a mnemonic for each of them.

I'm hopeless at remembering numbers. This is how I learned my car registration number, which is J611 UVC. J happens to be the first letter of my surname (Johnson). The number 611 is like the American emergency number 911, but with the 9 upside down. UV is a standard abbreviation for 'ultra-violet'. And C stands for 'car'!

This probably sounds ridiculous, but I repeat, the more ridiculous, the easier a mnemonic is to remember. It doesn't matter either that my car is actually red, as long as I remember the correct number. If I want to recall my registration number I say to myself: 'Johnson 611, ultraviolet car.'

Visualisation involves placing information spatially in your imagination. Let's suppose that you are studying Chemistry. You want to memorise the periodic table. You could take different sections of the table and, in your imagination, 'place' each section in a different room of your home. Or if you are studying English, you could take the plot of a novel and think of it as a journey along the street in which you live.

Another way to improve your memory is to write information down and then copy it out again. But beware of *passive* copying. Your brain may go to sleep while your hand mechanically copies out the text!



If you have a cassette recorder with a microphone, you could read your notes onto a tape and play back the tape to yourself from time to time. While revising for a literature exam, a friend of mine played a tape recording of Shakespeare's play *Hamlet* back to herself every night for a week, while she was asleep! This might sound like a thoroughly *passive* thing to do, but the brain is actually quite receptive to external sounds and other sensations as we sleep.

Diagrams, pictures and flow charts can be good ways of remembering information, especially if you brighten them up by using a system of colour-coding.

ACTIVITY 19

- 1. Look at the introduction to your Oxford Open Learning study pack.
- 2. Find the heading 'The Content of the Course'.
- 3. Devise a diagram to summarise the course content.
- 4. Make sure you include the title of each module and lesson.
- 5. How can you colour-code your diagram to assist your memory?

Symbols are a great way of concentrating a lot of information into a small space. Road traffic signs are a good example. Drivers wouldn't have time to read a set of long-winded instructions, but by learning a few simple symbols they are able to understand quite complex information at a glance.



Many textbooks use symbols, or icons, to identify particular activities or themes. You can invent your own symbols to help you to remember key facts and ideas.



Understanding classification

Classification is more important in some subjects than in others, but it has some relevance to all of them. Biology, for example, is hugely dependent on classification.



Language itself is a system of classification. Sometimes objects or ideas can be classified in different ways.

Here's a simple example of classification. Look at this list of objects.

- ruler
- pencil
- pen
- thermometer
- rain gauge
- marker pen
- stick of chalk
- tape measure

This list can be divided into two categories: instruments of writing and drawing, and instruments of measurement:

writing and drawing	measurement	
pencil	thermometer	
pen	rain gauge	
marker pen	ruler	
stick of chalk	tape measure	

ACTIVITY 20

Classify this list of items according to what they are made of. (If the item is made of more than one material, choose the material it is mostly or usually made of.)



window	violin	table
computer disk	wine glass	tape cassette
light bulb	knife	telephone
scissors	cricket stump	lawnmower
paper clip	pencil	teaspoon

Making inferences

To *infer* is to make an educated guess. Some people won't admit they make guesses, but if your guesses are based on all the evidence available, they are often the best you can do. And if you're studying English or another language, you will find yourself making inferences all the time.

Every time you see an unfamiliar word you need to work out what it means from its context. If you lack the courage to make inferences, you will miss valuable learning opportunities.

ACTIVITY 21

Below is a paragraph from a story. Some of the words have been replaced by nonsense words. These are highlighted in bold.

- 1. Read the paragraph and *infer* the meaning of the nonsense words.
- 2. Replace the nonsense words with suitable real words.

The building was so **lerp** that it seemed to pierce the sky. Helen looked **ek** at it from the street. She walked towards the **glot** and went inside. As she was going to the 12th **dumble**, she decided not to walk up the **hiddles**. She pressed the button to summon the lift instead. The lift travelled so **ratly** that it only took a few seconds to **crend**



the 12th **dumble**. Helen knocked on the **glot** of office 1202. A **tarbow** inside called 'Come in!'

Translating information from one form into another

This skill is formally tested in some subjects, such as Geography, where you might be asked to describe in words certain features of a landscape after interpreting symbols on a map. The ability to translate information from one form to another also plays a major role in enabling you to take an *active* role in your revision (see Chapter 6).

ACTIVITY 22

- This activity asks you to draw a graph on a sheet of graph paper.
- 2. The graph will record the daily maximum temperature in Birmingham during a one-week period in December.
- 3. All the information you need to draw your graph appears in the following paragraph:
 - On Monday 14 December the highest daytime temperature was surprisingly warm: 11°C, in fact. The next day it dropped to 4°C. On Wednesday 16 December the maximum temperature was only 2°C. Thursday saw a daytime high of 7°C, and the next day was 3°C warmer. The temperature cooled by 4°C on Saturday and the maximum temperature on Sunday was the same.
- 4. When you have finished, note how much more concise (and therefore easier to remember) your graph is than the paragraph of information.



Empathising

Empathy involves attempting to put yourself into the position of another. It is an imaginative way of escaping from our subjectivity, i.e. from seeing things only from our own, personal, limited point of view.

The skill of empathising is useful in the study of History, where we might want to imagine what it was like, for example, to be a peasant during the Russian Revolution. It is also important in English Literature, where we might imagine how it felt to be Banquo in Shakespeare's *Macbeth*. Indeed, history syllabuses often ask students to empathise with people caught up in specific historical situations.

But scientists use empathy too. The other day I heard a radio programme about evolution. One expert talked about how he had found it useful to try to imagine what it's like to be a gene!

More commonly, empathy is useful when simply trying to understand another person's point of view. We try to solve conflicts by discussion and negotiation rather than by going to war. We are not always successful in this, but empathy surely plays a major role in our efforts.

ACTIVITY 23

- 1. Choose one of the following and try to imagine what it would be like to be this person or thing.
- 2. Write a paragraph describing how you feel in your imagined identity.
 - Tony Blair on the day he won the 2005 General Election
 - Your next-door neighbour
 - A £2 coin
 - a molecule of water



- a squirrel coming out of hibernation in the spring
- a computer
- a dog whose owners are kind but do not notice how intelligent it is
- the Niagara Falls

Assessing your own progress

Generally, active learning is more effective than passive learning. You need to get as actively involved in your studies as possible. The skills listed above will help you to do this. By using your senses, your memory, and your imagination, you will study much more efficiently than if you just sit back and hope that it will somehow happen. You need to be the driver, alert, aware of where you are going - not a passenger dozing off in the back seat.

One way of getting involved is to monitor your own progress regularly. This will help you identify any weaknesses when the time for revision comes along. All good home study courses include regular self-testing activities which will help you to achieve this goal.

ACTIVITY 24

Note: if you are studying more than one subject, you should do this activity once for each subject, making separate lists of relevant skills.

- 1. Look carefully at the study skills discussed in Sections B and C of this chapter.
- 2. Think of how necessary or unnecessary each skill is for the subject you are studying.



- 3. Allocate a number from 1 to 5 according to how important you think the skill is for your subject.
- 4. Give the skill '1' if you think it is absolutely necessary.
- 5. Give it '5' if you think it is totally irrelevant.
- 6. Now give a letter from A to E according to how competent you think you are at each skill.
- 7. Give the skill 'A' if you are completely competent.
- 8. Give the skill 'E' if you are no good at it at all.
- 9. Now look at the marks you have given to each skill.

A's and B's and 1's and 2's are fine. A score of B1 or A2 suggests that you know how to use the skills you know are important in your subject.

If you have scored D4 or E5 for a particular skill, you may not need this skill in your subject of study. (Ask your tutor to confirm this.)

Scores of D2, E1 etc., however, suggest that you need to practise this skill carefully, since it is necessary for your course, but you are not yet very good at it.

If possible, discuss your responses to this activity with your tutor.

D STUDY DIFFICULTIES AND HOW TO OVERCOME THEM

This whole book is designed to help you identify study difficulties and then overcome them. The other three sections in this chapter deal with specific study skills. This



section takes a number of typical problems and refers these to the relevant chapters and sections of the book. It functions rather like a problem-solving index. Sarah, Ibrahim, Philippa, Shefali and Alan tell us about the problems they have faced while studying, and how they went about finding solutions.

Philippa says: 'My Psychology course began well. I was really enjoying it. But after three months the lease on my flat expired and I had to move out. I couldn't find a big enough



place. I had nowhere to put all my books and papers. In my old flat I could spread things out and I knew where to find my work when I needed it. But in the new place everything is cramped and disorganised.

'So I got out my *How to Study* guide. I hadn't looked at it for ages. In Chapter 1, Section C, I found some helpful advice. Ideally, everything you

need for studying should be arranged on shelves, or in a filing cabinet. But if you don't have enough space, you can store your stuff in cardboard boxes. The important thing is to label everything and keep it in some kind of order.

'So I went to the supermarket and got four big boxes. My notes were already arranged by topic. I put these into two of the boxes and wrote the topics on the front with a thick black pen. My study pack and my textbook went into the third box, together with pens, pencils and blank paper. And I put my reference books (an English dictionary, a dictionary of Psychology, and a thesaurus) into the last box. Finally, I stacked the boxes in the corner of my room, so that they were out of the way when I wasn't using them.'



Ibrahim says: 'Right from the start I had problems with my GCSE French. I really wanted that job in Africa, but the work seemed too hard. I didn't have a picture of what I had to do or where I was going.

'So I telephoned my student adviser and asked her what I should do. She asked whether I had the syllabus and past $\,$

exam papers. I'd forgotten to send off for these. She also suggested I took a closer look at the *How to Study* book.

'I hadn't bothered with the Study Guide much when it arrived in the post. I was too keen to get on with the French course. Anyway I thought I knew how to study. But now I realised that I should have done some background work first. So I wrote to the examining board



and got the syllabus and exam papers. Now I had a clearer picture of the whole course and what I was meant to do.

'Then I received a reminder in the post from Oxford Open Learning, telling me I ought to look for an exam centre without delay. It was a good thing I didn't leave it any longer, because it took several visits to exam centres before I found one that was willing to allow me to sit. If I'd waited much longer, I would have missed my chance, and what a waste that would have been!'



Alan says: 'At first I was really keen to study. I want to get promotion, and I'm tired of the other guys in my platoon pulling my leg because I haven't got any qualifications. They say I'm thick!



'For the first six weeks I studied every day. I was making good progress. But studying is tough! The guys would interrupt me when I was just opening up my study pack and I'd get dragged off to play pool. So I skipped a day, then two days, then a whole week. I began to feel useless. All my dreams were slipping away from me.

'I phoned Lloyd, my Maths tutor, to ask his advice. What should I do? He said I needed to re-start my Study Plan. 'Don't be too ambitious,' he said. 'Spend half an hour a





day for a week, until you're back on track. Then build up from there. Look at your *How to Study* guide for other ideas.'

'So I tried it, and it worked. I had a talk with my mates and they agreed to leave me alone at set times. I also looked up Section C of Chapter 2 in the *How to Study* guide, where I found some advice about time management. I also read up on motivation in Section A of Chapter 2, and on developing my self-image in Section A of Chapter 1. Finally, I found advice about how to deal with interruptions in Section C of Chapter 4.



'After a couple of weeks I was doing two hours' studying each day. I photocopied my Weekly Study Timetable and gave a copy to each of my friends. That made it official. They realised I was serious and stopped pestering me when I was busy.'

Sarah says: 'I found the GCSE Business Studies course very exciting, but the Accounting was gobbledygook to me. There was too much new material. I got so worried about this that I couldn't sleep. I persuaded my doctor to give me some sleeping pills but they just made me feel stupid. I couldn't do anything. I certainly couldn't study.

'So I stopped taking them. Then I read Chapter 6 of the *How to Study* guide. I started going for a mile-long walk each day to get some fresh air and exercise. I felt a bit more positive and decided it was time to get organised. So, as it advises in Chapter 2, Section C, I looked at the syllabus and some past papers and tried to work out what I already knew. My tutor told me this is called 'prior knowledge'.



'By referring back to the topics listed in the syllabus I could identify the parts I already knew something about. I looked up the *How to Study* guide again and re-did Activity 7 from Section C of Chapter 2. This boosted my self-confidence, because I realised I already knew something about some of the main topics, such as accounting data and verification of accounting records.

'I identified my problem areas as limited liability companies, manufacturing concerns, and the analyisis of accounting systems. At least I now knew where to concentrate my energies!'

Shefali says: I worked consistently until about three months before the exam. I was fascinated by Biology. The *How to Study* guide helped with its practical advice and related activities.

'I knew I was doing well. The feedback from my tutor was very positive. I telephoned her at least once a month, and when I had a problem she sorted it out for me quickly. My marks on the TMAs ranged from just about OK to very good. I got 90% for one assignment. I was proud of that.



'But around the middle of March things started to go wrong. I found it more and more difficult to concentrate on

my studies. I started inventing all kinds of reasons to do something else — anything but study. Only a week earlier my desk was where I belonged, but suddenly I just couldn't sit there any more.

'It took me a few days to identify the problem. The closer the exams, the more worried I became. I was terrified of failing! I called up both my tutor and my student adviser and they basically told me the same thing: "You're doing fine. Don't



panic. Carry on studying. Don't worry about the exam. Get some practice at exam technique, particularly working against the clock, and everything will be alright."

'My tutor also referred me to the *How to Study* guide, which I hadn't paid much attention to. After all, I thought I already knew everything about how to study!

'I looked up Chapter 7 (the one about exam preparation) and worked through some of the activities. This made me less panicky. I also read the first section of Chapter 5: this helped too. By getting regular practice at how to approach the exam, I managed to reduce my fear to a minimum. I still had butterflies in my stomach, but the whole experience was nothing like as bad as I had anticipated. And, yes, I passed in the end!'



ACTIVITY 25

- 1. Read about the study problems faced by the following students (Mike, Doreen, Gwen, Ali and Lionel.)
- 2. Imagine you are the students' tutors.
- 3. Look up and note down which sections of the *How to Study* guide each of them should work through in order to help them with their problems.
- 4. Write brief notes on the advice you would give each student over the telephone.

Mike says: 'I didn't have too many difficulties with the course itself, but I'm running into trouble now it's time for revision. I feel like my head is full of stuff and I can't see the wood for the trees. What should I do?'

Doreen says: 'I like the course I'm doing, which is 'A' level Government and Politics. But I'm having trouble getting the assignments in on time. I'm falling behind and my tutor has to keep phoning me to ask what's happening. I suppose I'm a perfectionist. I always think there's room for improvement. I can't let go. My assignments never seem to be finished. What can I do about this?'

Gwen says: 'I'm doing GCSE Geography. I can't read maps properly. I always get the wrong co-ordinates. Maybe that's because I don't have any sense of direction. Also, I don't understand the assignment questions. I read all the material in the modules, but when it comes to activities and assignments, I don't know what to do. How can I solve these problems?'

Ali says: 'I seem to spend all my time getting organised, but I never get started on the actual work. Yesterday I spent an hour tidying my desk, sharpening my pencils and filing my notes on GCSE Sociology. By the time I'd finished doing that there was no time left for studying, so I went to the pub and had a couple of pints to try to forget all about it. What can I do?'

Lionel says: Tim really determined to succeed. I'm doing GCSE Chemistry and Physics. I'm studying for five hours every day, on



top of doing a full-time job. I really haven't got time to go out and see people, and I won't let my friends in when I'm busy. I even cancelled my subscription at the local gym so I could concentrate on my studies.

'Although I'm working really hard, I'm not feeling too good. I'm tired all the time and I'm finding it hard to concentrate. My skin is getting spotty and my girlfriend says I'm becoming very irritable.'



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