



MIND TOOLS

Essential skills for an excellent career



Information and Study Skills

Information & Study Skills

Mind Tools - Practical Thinking Skills for an Excellent Life

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Module 5

Information & Study Skills

- How to take notes effectively - *Concept Maps*
- Fully absorbing written information - *SQ3R*
- *Speed Reading*
- Reading faster by thinking what to read - *Reading Strategies*
- Keeping information fresh in your mind - *Review Techniques*

5. Information & Study Skills

The techniques in this module will help you to master information. By using them, you will be able to improve:

- Your reading skills, so that you can find the information you need quickly and easily.
- The way you make notes, so that they become clear and easy to understand, and quick to review.
- Your review techniques, so that you can keep information fresh in your mind.

These techniques will help you to assimilate information quickly. This may involve keeping yourself up-to-date on events within your field, absorbing information within reports, or learning specialist information needed to complete a project.

These are also very useful tools for mastering course material where you are studying for exams. They work particularly well in conjunction with the memory techniques described in module 5. Used together, these two sets of tools will give you a formidable advantage in organizing and remembering information. This is often what exams are about.

Techniques discussed are:

- How to take notes effectively - *Concept Maps*
- Fully absorbing written information - *SQ3R*
- *Speed Reading*
- Reading faster by thinking what to read - *Reading Strategies*
- Keeping information fresh in your mind - *Review Techniques*

Concept Maps are powerful tools for recording and organizing information. They do this in a format that is easy to review. Once you understand and start using Concept Maps, you will never again want to take notes using conventional techniques.

The next three techniques (SQ3R, Speed Reading and use of Reading Strategies) help you to assimilate and understand written information quickly and efficiently.

The section on Review Techniques will help you to keep information that you have already learned alive in your mind.

Concept Maps (5.1)

Function: **How to Take Notes Effectively**

How to use tool: Concept Maps are very important techniques for improving the way you take notes. By using Concept Maps, you show the structure of the subject and linkages between points, as well as the raw facts contained in normal notes. Concept Maps hold information in a format that your mind will find easy to remember and quick to review.

Concept Maps completely abandon the list format of conventional note taking. They do this in favor of a two-dimensional structure. A good Concept Map shows the “shape” of the subject, the relative importance of individual points, and the way in which one fact relates to other. Concept Maps are more compact than conventional notes, often taking up one side of paper. This helps you to make associations easily. If you find out more information after you have drawn the main Concept Map, then you can easily integrate it with little disruption.

Concept Maps are also useful for:

- Summarizing information
- Consolidating information from different research sources
- Thinking through complex problems, and
- Presenting information that shows the overall structure of your subject

Concept Maps are also very quick to review, as it is easy to refresh information in your mind just by glancing at one.

For people who have good spatial memories, Concept Maps can be effective mnemonics. Remembering the shape and structure of a Concept Map can provide the cues necessary to remember the information within it. They engage much more of the brain in the process of assimilating and connecting facts than conventional notes.

Drawing Basic Concept Maps

This e-book was researched and planned using Concept Maps. They are too large to publish here, however part of one is shown below. This shows research into time management skills:

Note that the idea of “levels” in 5.1.1. is only used to help show how the Concept Map was created. All we are showing is that major headings radiate from the center, with lower level headings and facts branching off from the higher-level headings.

Improving your Concept Maps

Your Concept Maps are your own property. Once you understand how to make notes in the Concept Map format, you can develop your own conventions to take them further. The following suggestions may help to increase the effectiveness of your Concept Maps:

- **Use single words or simple phrases for information:**
Most words in normal writing are padding, as they ensure that facts are conveyed in the correct context, and in a format that is pleasant to read. In your own Concept Maps, single strong words and meaningful phrases can convey the same meaning more potently. Excess words just clutter the Concept Map.
- **Print words:**
Joined up or indistinct writing can be more difficult to read.
- **Use color to separate different ideas:**
This will help you to separate ideas where necessary. It also helps you to visualize of the Concept Map for recall. Color also helps to show the organization of the subject.
- **Use symbols and images:**
When a symbol or picture means something to you, use it. Pictures can help you to remember information more effectively than words.
- **Using cross-linkages:**
Information in one part of the Concept Map may relate to another part. Here you can draw in lines to show the cross-linkages. This helps you to see how one part of the subject affects another.

Key points: Concept Maps provide an extremely effective method of taking notes. They show not only facts, but also the overall structure of a subject and the relative importance of individual parts of it. Concept Maps help you to associate ideas and make connections that might not otherwise make.

If you do any form of research or note taking, try experimenting with Concept Maps. You will find them surprisingly effective.

SQ3R (5.2)

Function: Fully absorbing written information

How to use tool: SQ3R is a useful technique for fully absorbing written information. SQ3R helps you to create a good mental framework of a subject, into which you can fit facts correctly. It helps you to set study goals. It also prompts you to use the review techniques that will help to fix information in your mind.

By using SQ3R to actively read a document, you can get the maximum benefit from your reading time.

The acronym SQ3R stands for the five sequential techniques you should use to read a book:

- **Survey**
Survey the document: scan the contents, introduction, module introductions and module summaries to pick up a shallow overview of the text. Form an opinion of whether it will be of any help. If it does not give you the information you want, discard it.
- **Question**
Make a note of any questions on the subject that come to mind, or particularly interest you following your survey. Perhaps scan the document again to see if any stand out. These questions can be considered almost as study goals. Understanding the answers can help you to structure the information in your own mind.
- **Read**
Now read the document. Read through useful sections in detail, taking care to understand all the points that are relevant. In the case of some texts this reading may be very slow. This will particularly be the case if there is a lot of dense and complicated information. While you are reading, it can help to take notes in Concept Map format (see [5.1](#)).
- **Recall**
Once you have read appropriate sections of the document, run through it in your mind several times. Isolate the core facts or the essential processes behind the subject, and then see how other information fits around them.
- **Review**
Once you have run through the exercise of recalling the information, you can move on to the stage of reviewing it. This review can be by re-reading the document, by expanding your notes, or by discussing the material with colleagues. A particularly effective method of reviewing information is to have to teach it to someone else!

For more information on reviewing information, see section [5.5](#).

Key points: SQ3R is a useful technique for extracting the maximum amount of benefit from your reading time. It helps you to organize the structure of a subject in your mind. It also helps you to set study goals and to separate important information from irrelevant data.

SQ3R is a 5 stage active reading technique. The stages are:

- Survey
- Question
- Read
- Recall
- Review

If you use SQ3R, you will significantly improve the quality of your study time.

Speed Reading (5.3)

Function: **Increasing your reading speed**

How to use tool: Speed Reading helps you to read and understand text more quickly. It is an essential skill in any environment where you have to master large volumes of information quickly, as is the norm in fast-moving professional environments.

The Key Insight

The most important trick about speed reading is to know what information you want from a document before you start reading it: if you only want an outline of the issue that the document discusses, then you can skim the document very quickly and extract only the essential facts. If you need to understand the real detail of the document, then you need to read it slowly enough to fully understand it.

You will get the greatest time savings from speed reading by learning to skim excessively detailed documents.

Technical Issues

Even when you know how to ignore irrelevant detail, there are other technical improvements you can make to your reading style which will increase your reading speed.

Most people learn to read the way young children read - either letter-by-letter, or word-by-word. For most adults, this is probably not the case - think about how your eye muscles are moving now. You will probably find that you are fixing your eyes on one block of words, then moving your eyes to the next block of words, and so on. You are reading blocks of words at a time, not individual words one-by-one. You may also notice that you do not always go from one block to the next: sometimes you may move back to a previous block if you are unsure about something.

A skilled reader will read many words in each block. He or she will only dwell on each block for an instant, and will then move on. Only rarely will the reader's eyes skip back to a previous block of words. This reduces the amount of work that the reader's eyes have to do. It also increases the volume of information that can be examined in a period of time.

A poor reader will become bogged down, spending a lot of time reading small blocks of words. He or she will skip back often, losing the flow and structure of the text and overall understanding of the subject. This irregular eye movement will make reading tiring. Poor readers tend to dislike reading, and may find it harder to concentrate and understand written information.

Speed reading aims to improve reading skills by:

- Increasing the number of words read in each block
- Reducing the length of time spent reading each block, and
- Reducing the number of times your eyes skip back to a previous sentence.

These are explained below:

Increasing the number of words in each block:

This needs a conscious effort. Try to expand the number of words that you read at a time. Practice will help you to read faster. You may also find that you can increase the number of words read by holding the text a little further from your eyes. The more words you can read in each block, the faster you will read!

Reducing Fixation Time:

The minimum length of time needed to read each block is probably only a quarter of a second. By pushing yourself to reduce the time you take, you will get better at picking up information quickly. Again, this is a matter of practice and confidence.

Reducing Skip-Back:

To reduce the number of times that your eyes skip back to a previous sentence, run a pointer along the line as you read. This could be a finger, or a pen or pencil. Your eyes will follow the tip of your pointer, smoothing the flow of your reading. The speed at which you read using this method will largely depend on the speed at which you move the pointer.

You will be able to increase your reading speed a certain amount on your own by applying speed reading techniques. What you don't get out of self-study is the use of specialist reading machines and the confidence gained from successful speed-reading - this is where a good one-day course can revolutionize your reading skills.

Key points:

By speed reading you can read information more quickly. You may also get a better understanding of it as you will hold more of it in short term memory.

To improve the speed of your reading, read more words in each block and reduce the length of time spent reading each block. Use a pointer to smooth the way your eyes move and reduce skip-back.

Reading Strategies (5.4)

Function: **Reading more efficiently by reading intelligently**

How to use tool: Good reading strategies help you to read in a very efficient way. Using them, you aim to get the maximum benefit from your reading with the minimum effort. This section will show you how to use 6 different strategies to read intelligently.

Strategy 1: Knowing what you want to know

The first thing to ask yourself is: Why you are reading the text? And, are you reading with a purpose or just for pleasure? What do you want to know after reading it?

Once you know this, you can examine the text to see whether it is going to move you towards this goal. An easy way of doing this is to look at the introduction and the module headings. The introduction should let you know whom the book is targeted at, and what it seeks to achieve. Module headings will give you an overall view of the structure of the subject.

While you are looking at the text, ask yourself if it assumes too much or too little knowledge. Would other material meet your needs more closely?

Strategy 2: Knowing how deeply to study the material

Where you only need the shallowest knowledge of the subject, you can skim material. Here you read only module headings, introductions and summaries.

If you need a moderate level of information on a subject, then you can scan the text. Here you read the module introductions and summaries in detail. You may then speed-read the contents of the modules, picking out and understanding key words and concepts. At this level of looking at the document it is worth paying attention to diagrams and graphs.

Only when you need detailed knowledge of a subject is it worth studying the text. Here, it is best to skim the material first to get an overview of the subject. This gives you an understanding of its structure, into which you can fit the detail gained from a full reading of the material. SQ3R (see [5.2](#)) is a good technique for getting a deep understanding of a text.

Strategy 3: Active Reading

When you are reading a document in detail, it often helps if you highlight, underline and annotate it as you go on. This emphasizes information in your mind, and helps you to review important points later.

Doing this also helps to keep your mind focused on the material and stops it wandering.

This is obviously only something to do if you own the document! If you find that active reading helps, then it may be worth photocopying information in more expensive texts. You can then read and mark the photocopies.

If you are worried about destroying the material, ask yourself how much your investment of time is worth (see [7.1](#)). If the benefit you get by active reading exceeds the value of the e-book, then the e-book is disposable.

Strategy 4: How to study different sorts of material

Different sorts of documents hold information in different places and in different ways. They have different depths and breadths of coverage. By understanding the layout of the material you are reading, you can extract useful information much more efficiently.

Reading Magazines and Newspapers

These tend to give a very fragmented coverage of an area. They will typically concentrate on the most interesting and glamorous parts of a topic. This helps them to sell copies. They will often ignore less interesting information that may be essential to a full understanding of a subject. Typically, areas of useful information are padded out with large amounts of irrelevant waffle or with advertising.

The most effective way of getting information from magazines is to scan their contents or indexes and turn directly to interesting articles. If you find an article useful, then cut it out and file it in a folder specifically covering that sort of information. In this way you will build up sets of related articles that may begin to explain the subject.

Newspapers tend to be arranged in sections. If you read a paper often, you can learn quickly which sections are useful and which ones you can skip altogether.

Reading Individual Articles

Articles within newspapers and magazines tend to be in three main types:

- **News Articles:**
Here the most important information is presented first, with information being less and less useful as the article progresses. News articles are designed to explain the key points first, and then flesh them out with detail.
- **Opinion Articles:**
Opinion articles present a point of view. Here the most important information is contained in the introduction and the summary, with the middle of the article containing supporting arguments.
- **Feature Articles:**
These are written to provide entertainment or background on a subject. Typically the most important information is in the body of the text.

If you know what you want from an article, and recognize its type, you can extract information from it quickly and efficiently.

Strategy 5: Reading “whole subject” documents

When you are reading a document critically, it is easy to accept the writer's structure of thought. This can mean that you do not notice that important information has been omitted or that irrelevant detail has been included. A good way of recognizing this is to compile your own table of contents before you open the document. You can then use this table of contents to read the document in the order that you want. You will be able to spot omissions quickly.

Strategy 6: Using glossaries with technical documents

If you are reading large amounts of difficult technical material, it may be useful to photocopy or compile a glossary. Keep this beside you as you read. It will probably also be useful to note down the key concepts in your own words, and refer to them when necessary.

Usually it is best to make notes as you go. The most effective way of doing this is to use Concept Maps (see [5.1](#)).

Key points: This section shows 5 different strategies and techniques that you can use to read more effectively.

These are:

- Knowing what you need to know, and reading appropriately.
- Knowing how deeply to read the document: skimming, scanning or studying.
- Using active reading techniques to pick out key points and keep your mind focused on the material.
- Using the table of contents for reading magazines and newspapers, and clipping useful articles.
- Understanding how to extract information from different article types.
- Creating your own table of contents for reviewing material.
- Using indexes, tables of contents, and glossaries to help you assimilate technical information.

Reviewing Learned Information (5.5)

Function: **Keeping information fresh in your mind**

How to use tool: Normally, peoples' memories of things they have learned are clearest immediately after they have learned them. They will then forget more and more information as time goes on. After a few months, they may only be able to recall only a tiny percentage of what was initially learned. This makes relearning information difficult when it needs to be done.

If you review information frequently, however, then you will be able to keep it fresh and alive in your mind. This makes it easy to recall when you need it with a minimum of effort.

This section explains how to review material in a structured and effective way.

The first step is to spend a few minutes reviewing material immediately after the learning session. This helps you to:

- Confirm that you understand the material;
- Reduce the time needed to relearn information when you need it; and
- Improve the quality of future learning, by building on a well-remembered foundation. This helps your mind to make connections and linkages that it would not otherwise make.

A good way of carrying out this review is to rewrite or tidy up notes. You can do this effectively by putting the information learned into a Concept Map (see [5.1](#)).

After this, reviewing information should be relatively easy and need not take long. Carry out reviews at the following times:

- After one day
- After one week
- After one month
- After four months

Review the topic by taking a few minutes to jot down everything you can remember about the subject, and compare this with your notes.

If you review information often, it should stay fresh in your mind, and will be easily accessible when you need it.

Key points: By reviewing information, you avoid forgetting information that will be difficult and time-consuming to relearn. You also ensure that you keep information fresh in your mind so that it acts as a foundation for future learning.

The first stage in reviewing information is to rewrite and tidy up notes immediately after learning has taken place. This confirms the structure and detail of information in your mind.

After this, periodically jot down what you can remember on a subject and compare it with your notes. This will show you what you have forgotten and refresh your memory.

Moving On...

We have put a great deal of effort into developing and testing this e-book to make it as useful as possible. If you have any suggestions on how we can improve it for the future, then please let us know at editorial@mindtools.com or through the Mind Tools web site at www.mindtools.com. Alternatively, if you have enjoyed this e-book and found it useful, please [let us know!](#)

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