



10:STUDY SKILLS

What do we mean by study skills?

When considering the place of study skills in your school, first ensure that colleagues are agreed on a definition.

STUDY SKILLS

- Study skills are also sometimes known as ‘research skills’, ‘library skills’, ‘information skills’, ‘information handling/retrieval skills’ or ‘reading to learn’. Problems with study skills may occur in various contexts:
 - when teachers ask pupils to research and/or produce a piece of work on pre-set questions or topics;
 - when teachers get pupils to research and record findings on a general topic;
 - when pupils are required to set their own questions or topics for research;
 - when pupils are briefed to evaluate their reading.
 - when pupils are asked to produce findings from their reading, including reading based on ICT and the reading of maps and diagrams. The findings might be presented not only in writing, or orally, but perhaps in the form of graphs, maps, tables or diagrams, a poster, a model, or a design.

In other words, study skills involve research and assimilating information at least partly, though not necessarily solely, in the form of text.

Some of the most common problems that teachers encounter with pupils’ study skills are inappropriate research strategies, poor notetaking, ‘copying whole chunks’ of text, for example by simply downloading from the Internet, and brief, untidy, or disorganised written outcomes.

Study skills are a matter for concern across the curriculum, not simply in English or ‘Literacy’. Thus, study skills should not be the sole responsibility of the co-ordinator for English, or the SENCO. All teachers should be encouraged to see themselves as teachers of ‘reading and writing to learn’.

- Study skills involve the following three main processes:
 - location of information

- organisation of information
 - reconstruction of information
- (Lunzer and Gardner, 1979).

Analysed more finely, the study skills required of pupils are:

- Identifying information already known, i.e. 'activation of prior knowledge'
- Identifying the information needed, which may involve posing suitable questions, for example in what form might the information be presented, and to whom.
- Locating and selecting possible sources of the information, for example a shelf in a library, a CD-ROM or the Internet, or an expert on the subject.
- Recognising the text type or types, and how to read them to obtain the information.
- Locating the information in the text.
- How to tackle a text if there are parts that are not understood.
- Selecting and extracting relevant information.
- Organising and recording the information, for example in note form
- Evaluating, interpreting, integrating and interrogating the information, i.e. 'making it the pupil's own'
- Using techniques to remember what one has learned
- Presenting or communicating the findings or viewpoint.

It may be rare for teachers to require pupils to apply all these skills on any one task, and the skills themselves do not necessarily follow in exactly this sequence. However, this comprehensive checklist, adapted from Wray and Lewis (1997b), shows that the skills are complex and multi-faceted, and that the list can be used to identify where pupils have problems.

WHY ARE STUDY SKILLS AN IMPORTANT FOCUS IN THE EDUCATION OF GIFTED AND TALENTED PUPILS?

The launch pad on underachievement explains that some able pupils are disadvantaged by the fact that their learning strategies are underdeveloped. Among these, poor study skills can be a major factor.

WHAT ARE THE KEY ISSUES TO CONSIDER?

- Identifying information already known.

Research highlights the importance of pupils' prior knowledge in enabling them to understand new knowledge (Anderson and Pearson, 1984, and Anderson, 1977, quoted in Wray and Lewis, 1997a). Prior knowledge also helps to turn any reading for research into an interactive, meaningful engagement (Neate, 1992).

To get the best from it, the pupils' prior knowledge should be recorded by the teacher and/or pupils, on cards which can be arranged, or on paper or a board. This will also:

- Establish what pupils know
- Establish what pupils do not know, and point up gaps in their knowledge
- Inform the teacher about pupils' misconceptions, so that he or she can direct their research accordingly without actually telling them that they are mistaken
- Help to ensure that pupils do not search for information they already possess.

Wray and Lewis recommend and describe the following methods:

- Exhaustive brainstorming, in pairs, groups or as a whole class
- Exhaustive concept mapping (described by Buzan, 1995, as mind mapping, and by Fisher, 1995, as cognitive mapping)
- Use of 'concrete manipulatives' (pictures, artefacts, videos, visits etc.) to stimulate memory
- Use of 'KWL' or 'KWFL' grids (the third column is optional):

| What do you already <u>K</u> now? | What do you <u>W</u> ant to Know? | Where can you <u>F</u> ind out? | What have you <u>L</u> earnt? |
|-----------------------------------|-----------------------------------|---------------------------------|-------------------------------|
| | | | |

In the first column, all information the pupil already knows is recorded. Further columns are explained below.

- In advance of the final writing task, the early use of writing frames, such as 'Before I researched this I thought...', 'Now I know...'

Marshall and Rowland (1993), in their useful book for older pupils, also recommend recording what is already known about a topic before beginning an essay, report or assignment. They suggest brainstorming a subject by asking oneself the questions 'Why?', 'Who?', 'What?', 'When?', 'How?', 'Where?' and noting down known answers.

➤ Identifying the information needed.

Teachers will often make the choice of specific questions or topics for research. However, it is essential that all pupils, not just the more able, learn to study and think independently. From time to time, they should be given opportunities to formulate their own questions and aspects for research. The practising of questioning skills undoubtedly helps to develop thinking skills. Buzan (1995) shows that if two groups are tested comprehensively on a text, but one has been given certain key questions or themes on which to focus, that group will perform better, even on aspects of the text on which they did not focus their reading. Readers need to be active, questioning readers to achieve success.

One invaluable method is the teacher's modelling of what makes a good, unusual, or interesting question to consider when reading or researching, for example a question that is neither too broad or too narrow, nor too difficult. Other recommendations are:

- Using the mind maps you have made on a subject, pick key words or concepts and encourage pupils to compose questions incorporating these, beginning 'Who?', 'Why?', 'What?', 'How?' etc. These can then be collaboratively evaluated for quality, appropriacy, amenability to research, etc., and the best selected and prioritised (Neate, 1992).
- Continue the 'KW (F)L' grid, mentioned above, by filling in the second column ('What do you Want to find out?') in response to what is already known, recorded in the first column. For example, the first column might record that pupils know that 'Substances are either solids, liquids or gases'. Pupils could then ask themselves, in the second

column, 'What are the differences between solids, liquids and gases? (Wray and Lewis, 1997 a and b)

- Use a 'QuADs' grid:

| Questions | Answers | Details |
|-----------|---------|---------|
| | | |

In the first column, record the questions to be researched. Once more, evaluate questions recorded (Wray and Lewis, 1997 a and b).

Further columns are explained below.

- Marshall and Rowland (1993) suggest good question openings for essays etc. for older, independent learners, e.g. 'How do I know that...?', 'What happens if...?', 'Could/should... be applied to...?', plus good questions to ask oneself to establish one's main focus of interest or confusion.

You may wish to allocate different kinds of questions/topics, or questions/topics of varying levels of difficulty, within a group. If they have been recorded by using one of the methods described above, it is possible to do this, however mixed in ability the class may be. It is particularly easy to if you have noted who generated which questions, e.g. by adding their initials.

- Defining a subject and the purpose for research.

As we have noted, if pupils *already have key questions and a purpose in mind* when they seek or read texts, they are more likely to locate and understand the relevant information. Teachers should review with pupils the precise wording and implications of the questions posed, e.g. the difference between 'analyse' and 'describe'. They should also explicitly discuss the uses to which their research will be put, e.g. is it solely for their own use, to develop learning? In such a case abbreviated notes may be sufficient.

Or is it to form the basis of a piece of writing, a diagram, model, presentation or display, for example for assessment by the teacher or for viewing by visitors? Are pupils aware of the literary conventions of any piece of writing which is expected as the final outcome? Different text types have distinctive structures and linguistic features. See below.

- Locating and selecting possible sources of the information.

Sometimes teachers will prescribe or even supply the reading they require of pupils. At other times, they will expect pupils to research information independently. Wray and Lewis (1997b) strongly urge teachers to avoid 'disembodied', worksheet-type exercises to practise locating information. The learning of study skills which will transfer to other situations is much more likely to result from the practice of these skills in context, i.e. where a topic really does demand research. Methods of focusing on this aspect of study skills include:

- Completing an F column on the 'KWL' grid, making it a 'KWFL' grid: 'Where might I Find the information?' This encourages pupils to think divergently, and to recognise

that there are many more sources of information than the library; for example, teachers, known experts, pamphlets, the Internet. (Wray and Lewis, 1997 a and b).

- Teaching pupils how to use the Dewey and other cataloguing and classification systems in libraries, and to scan the shelves by casting one's eye over the main 'signposts' and looking for useful markers.
- Teaching pupils how to navigate CD-ROMs, the Internet, etc, both purposefully and efficiently.
- Marshall and Rowland (1993) have useful practical guidance for older, independent learners on how to find and select relevant texts, on choosing libraries, on the many kinds of information available in different sections of libraries and on accessing reference material. They also discuss primary and secondary sources and the electronic media.

➤ Recognising the text type or types, and how to read them to obtain the information. Buzan (1995), Wray and Lewis (1997b), and others emphasise that before embarking on a reading for purposes of research it is useful to get an overview of the text. The teacher should model ways of doing this, making his/her thought processes accessible to pupils: 'I want to find out about x. How do I find out whether this text might have information about x? Well, first I'm going to...'. Methods which might be introduced to the pupils in this way include:

- *Browsing*. Casually and rapidly flip through pages, getting the 'feel' of the text. This involves observing its organisation and structure, level of difficulty, proportion of diagrams and illustrations to text, and the location of any summary or conclusion sections. (Buzan, 1995). Neate (1992) calls this a 'Survey', as part of the 'SQ3R' method, which is very similar to the other methods described here.)
- *Skimming* gives the reader an impression of the subject-matter of a text, i.e. its gist, and gauges its readability level. De Leeuw (1965) describes skimming as stilling the eye to take in some of the sense of chunks of text at once. There are various ways of doing this, for example by running a finger and the eye down the middle of a page, or by 'hopping down' in movements that include four or five lines at once. Recall key or memorable words, or even say them out loud as you skim, to gain an overview of the content. Marshall and Rowland (1993) offer practical advice on 'speed reading' and reading of other kinds, e.g. reading for 'depth' and reading for 'breadth', for older pupils.

Readability is influenced by many factors, for example amount of punctuation, length of words, complexity of sentences, and number of technical terms or proper names. However, research quoted in Neate (1992) shows that pupils themselves are capable of judging what makes a text 'difficult' for them to read. They should be encouraged to read texts which are within their scope. If they *must* use a 'difficult' text, they should be taught to ignore parts they do not understand, when they are taking notes, or investigate obscure meanings by using dictionaries and glossaries, and talking to peers, etc.

- *Using contents lists, indexes and major headings*. Discuss with the pupils the functions of each in locating information. Always brainstorm the key words that may occur in a chapter or section heading. For example, if the topic to be researched is

deforestation, key words that flag up relevant sections may include 'cutting', 'chopping', 'land clearance', 'stripping', 'timber', 'destruction', etc.

- *Scanning* is used to identify the text type and how it should be read, and to locate within a chapter, section or page the information needed. Pupils who have experienced the National Literacy Strategy will be aware of six types of non-fiction text: report (information), recount, explanation, procedure (instructions), persuasion and discussion (discursive). While these are not mutually exclusive, each has characteristic linguistic features and structures. By glancing rapidly over the layout and main features of a page or section, you can identify the predominant text type. Discuss with pupils how it should be read. For example, instructions should be 'close-read', in detail, from start to finish, to ensure no mistakes are made, whereas information text can generally be read selectively, and in any preferred order. Looking at the 'principal signposts' on a page (illustrations, large headings, bold words etc.) enables you to locate the information needed while ignoring other information.

➤ Locating information in the text.

Scanning and skimming, as described above, enable pupils to locate relevant information quite precisely – *as long as key words, including synonyms, are brainstormed in advance.*

In some cases, it may be possible for pupils to underline or highlight essential information, e.g. on photocopies or worksheets.

If books or other valuable resources are being used, pupils could be asked to clip a sheet of acetate over the text and to make text markings on to this with non-permanent pens. Research (e.g. quoted in Neate, 1992) shows that underlining and highlighting are some of the most successful methods for extracting and learning relevant information.

Teachers should help pupils to focus upon the most essential words and ideas, rather than non-lexical words (the, and, there, etc.) and to avoid taking in whole sentences. You may wish to ask pupils first to delete any text they do not understand, or to highlight it in a different colour for investigation later. Lunzer and Gardner (1979) suggest work and discussion in pairs or small groups, e.g. 'Now tell your partner what you think the text means.' These approaches help to reduce thoughtless copying.

➤ Monitoring the understanding of the text.

As noted above, teachers should allow for a stage in pupils' research in which they can find simpler texts when necessary, ignore text they do not understand, or investigate this text.

➤ Selecting and extracting appropriate information.

Neate (1992) shows that the underlining of only key ideas and words in a text aids the later use and recall of the information in other contexts. Lunzer and Gardner suggest that pupils should locate information in several different categories, and then colour-code these categories. For example, if studying medieval life, pupils might underline information about food and drink in one colour, travel and transport in another, clothing in another, and so on. If a piece of discursive text is being studied, pupils might colour-code 'pro' arguments one way, 'con' arguments another, and perhaps judge the weight of each argument, by entering numbers in the margins.

If pupils need to summarise a text, or to form an overall view of it, they could be asked to underline, within any given paragraph, one key phrase or sentence which they feel embodies the paragraph's main theme. Alternatively, they could try to find a 'category' to which the information in each paragraph or section belongs, and label each paragraph accordingly (e.g. 'people', 'events', 'consequences'...).

➤ Organising and recording the information, e.g. in note form.

Neate (1992), Lunzer and Gardner (1979) and Wray and Lewis (1997a and b) all describe ways of teaching the recording of information, including notetaking.

If methods of underlining, labelling or highlighting have been used, the next step is to copy out the selected phrases in some form, e.g. on a separate page, in a table, or in a summary or concept map.

- Wray and Lewis's 'KW(F)L' grid (see above) asks pupils to record such information in the final column: 'What have I Learnt?'
- In their 'QuADs' grid, the final column (after Answers, Details) has the advantage of obliging pupils to expand on the first, brief notes they made in the second column.
- You may wish to generate a table of your own. For example, the medieval study, above, could employ such headings as Travel, Clothing, and Food and Drink. These headings should categorise the information pupils are to find.

Teachers may worry that pupils will still be transcribing some of the original text at this stage. It is inevitable that some words, e.g. technical terms, will be identical. At the same time, teachers can encourage the use of thesauruses, the brainstorming of synonyms, etc. to replace some of these words where appropriate.

Neate (1992) states that no one notemaking technique has been found to be superior to others. A range of approaches is likely to work with a range of pupils. In particular, model your own methods of notetaking, including the abbreviations you use, etc. Buzan (1995) advocates mind maps for those pupils who think more in a 'visual' than in a 'linear' way.

➤ Evaluating, interpreting, integrating, and interrogating the information

For this next stage, it is essential that pupils no longer have access to the original text or texts from which they have been working, but only to the notes or tables which they have generated since. The information can then be evaluated, interpreted, integrated and interrogated e.g. in a class discussion or feedback session. Pupils can be asked to generate questions about what they have discovered, or be briefed for a further task, e.g. a piece of writing or a presentation.

➤ Remembering what has been learnt

Fisher (1995) stresses the importance of 'cognitive coaching' in ensuring that pupils actually learn from what they have read and studied. He describes the intellectual processes involved when pupils read to learn, and lists these as key features in cognitive coaching:

- Giving individual pupils a focus for their learning and following it through in a structured, sequential way
- 'Reciprocal teaching', i.e. an interactive approach in which the teacher and learner take it in turns to teach or show each other what they have learnt

- Summarising, i.e. judging which ideas are important, to condense information and communicate it as key ideas
- Explaining, i.e. structuring what is to be remembered, repeating what has been learnt, and reviewing how the learning links together
- Modelling, i.e. performing actions or showing ways of learning which the learner can understand, follow, and imitate
- Giving positive feedback, i.e. reflecting what pupils have done well and how their learning is progressing.

Marshall and Rowland (1993) give practical advice to older pupils on techniques for remembering and memorising.

➤ Presentation or communication of findings or view.

If pupils are not yet adept at translating their research into a new, written form, it might be appropriate to ask them to present it in a different form, e.g. an oral presentation, a role-played interview, a diagram, model, illustration or table. Would any of these show their learning just as effectively, and help those whose ability lies elsewhere than in writing? Wray and Lewis (1997a and b) argue that, in any case, translating written information into other forms actually enables pupils to process and retain their learning more thoroughly.

If you do seek a written outcome from pupils' studies, make sure that they refer only to their own notes or other recorded forms, not to the original texts, unless they are very competent readers and writers. If pupils need support with the structure and linguistic features of the writing, examine the principles and usefulness of writing frames (Lewis and Wray, n.d. and 1998). For older pupils and teachers, Hennessy (1994) and Smith (1994), and Marshall and Rowland (1993), give detailed, practical advice on planning, structuring, drafting and writing essays and assignments. Hennessy and Smith give extremely useful case studies of pupils' writing difficulties, and ideas on how to improve their written work.

WHAT MIGHT WE DO IN SCHOOL?

- Use the checklist of study skills provided at the beginning of this launch pad to:
 - Audit which of these skills you explicitly teach.
 - Audit in which of these skills your pupils have difficulties.
 - Decide which skills from the checklist are considered essential by your colleagues. Put these skills in order of priority.
 - Plan how to incorporate into future lessons the work on the study skills you have identified
- Audit the texts most commonly used in the school in lessons and/or for homework:
 - Report, recount, explanation, procedure, persuasion, discussion (existing and forthcoming National Literacy Strategy materials will enable you to identify these).
 - Decide whether to review with pupils the characteristics of these text types and how to read them. Consider displaying in your classrooms labelled posters about these text types, which you can then use as teaching aids during lessons.

- Review the readability of texts you commonly use in class, inviting pupils' own views. How complex are the texts? How easy is it to locate and obtain information?
- Regularly revise and practise, with pupils, strategies for reading texts for research purposes: browsing, skimming, scanning, etc.
- Regularly revise and practise, with pupils, strategies for extracting information from texts: identifying key words and ideas, underlining, notetaking, etc.

RECOMMENDED READING

Buzan, T. 1995. *Use Your Head*. London: BBC Books.

De Leeuw, M. & E. 1965. *Read Better, Read Faster: The essential guide to greater reading efficiency*. London: Penguin Books.

Fisher, R. 1995. *Teaching Children to Learn*. Cheltenham: Stanley Thornes.

Hennessy, B. 1994. *How to Write an Essay*. Plymouth: How to Books.

Lewis, M. & Wray, D. n.d. *Writing Frames: Scaffolding children's non-fiction writing in a range of genres*. Reading: Reading and Language Information Centre.

Lewis, M. & Wray, D. 1998. *Writing across the Curriculum: Frames to Support Learning*. Reading: Reading and Language Information Centre.

Lunzer, E. & Gardner, K. 1979. *Learning from the Written Word*. Edinburgh: Oliver and Boyd.

Marshall, L. & Rowland, F. 1993. *A Guide to Learning Independently*. Buckingham: Addison Wesley Longman.

Neate, B. 1992. *Finding Out about Finding Out: A practical guide to children's information books*. London: Hodder and Stoughton.

Smith, P. 1994. *How to Write an Assignment: Improving your research and presentation skills*. Plymouth: How to Books.

Wray, D. & Lewis, M. 1997a. *Practical Ways to Teach Reading for Information*. Reading: Reading and Language Information Centre.

Wray, D. & Lewis, M. 1997b. *Extending Literacy: Children reading and writing non-fiction*. London: Routledge.

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