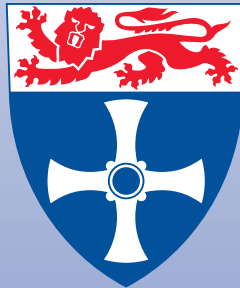


UNIVERSITY OF
NEWCASTLE UPON TYNE



Study Skills Guide

Disability Support Service
University of Newcastle upon Tyne[©]

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Study Skills Guide

Disability Support Service
University of Newcastle upon Tyne®

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Learning Styles

At University you will be expected to be an independent learner. Therefore, it is advisable to think carefully about your learning style and how best you can use your learning strengths to support your academic studies. Use this part of the guide to help you:

- To think about the different ways you perceive and understand information;
- Consider your most appropriate learning environment;
- To identify how you process information most effectively;
- To identify different strategies and skills that will benefit you as a learner;
- To understand multi-sensory techniques.

Learning Styles Questionnaire

Tick the response which best suits you.

1. Do you usually remember more from a lecture when:
 - a) You do not take notes, but listen very carefully
 - b) You sit near the front of the room and watch the lecturer
 - c) You take notes
2. Do you usually solve a problem by:
 - a) Talking to yourself or a friend
 - b) Using an organised, systematic approach like lists, etc.
 - c) Walking, pacing or some other physical activity
3. Do you remember phone numbers (when you can't write them down) by:
 - a) Repeating the numbers orally
 - b) Seeing or visualising the numbers in your mind
 - c) Writing the numbers with your finger on the table or wall
4. Do you find it easier to learn something new by:
 - a) Listening to someone explain how to do it
 - b) Watching a demonstration of how to do it
 - c) Trying it yourself
5. When you try to remember something do you:
 - a) Try to see it happen in your mind
 - b) Hear in your mind what was said or the noises that occurred
 - c) Feel the way 'it' reacted with your emotions

6. If you don't know how to spell a word, do you:
- a) Sound it out
 - b) Try to see it work in your mind
 - c) Write the word in several ways and choose the one that looks right
7. Do you enjoy reading most when you can read:
- a) Dialogue between characters
 - b) Descriptive passages that allow you to create mental pictures
 - c) Stories with lots of action in the beginning (because you find it difficult to concentrate early on)
8. Do you remember people you have met by their:
- a) Names
 - b) Faces
 - c) Mannerisms, movements, etc.
9. Are you distracted mainly by:
- a) Noises
 - b) People
 - c) Environment (temperature, comfort of furniture, etc.)
10. Do you have problems sitting still to read? If so, do you:
- a) Talk with a friend
 - b) Watch TV or look out of the window
 - c) Fidget in your chair, or can't lie still in bed

Count the total number which fall into the following categories

- a) Auditory (by hearing)
- b) Visual (by seeing)
- c) Kinaesthetic (by touching, doing or moving)

Study Strategies for different learning styles

Auditory

If you are an auditory learner, it means you will learn best by hearing information. Consider making use of sound in the following ways:

- Talk or read aloud to yourself as you learn information;
- Talk through and/or review information with friends;
- Record information on to tape or disc to enable you to listen back over information;
- Ask a friend to read text or lecture notes aloud to you;
- Have music playing in the background while you read or write;
- Work in a silent room.

Visual

Visual learners often learn best from seeing information presented in diagrams, charts or pictures. Try using some of the following visual techniques:

- Plan work using spider diagrams, lists or tables, pictograms and mind maps;
- Write down all information;
- Use coloured pens to highlight important information when reading and to link similar ideas and arguments as you identify them (But only if you are using your own text);
- Use coloured paper for different modules or subjects;
- Use large wall charts or planners to organise your work;
- Try to visualise information and ideas in your mind;
- Vary the environment or position in which you work as this may create a link between your visual setting with a particular subject area.

Kinaesthetic

A kinaesthetic learner will learn best by touching, doing or moving. Try to think physically by:

- Discussing ideas with friends;
- Putting different arguments and ideas on separate pieces of paper when planning essays, allows you to physically organise your answer;
- Going over information in your mind while walking, jogging or swimming;
- Using colour or draw pictures and diagrams alongside written notes;
- Moving around your environment during independent study time.

Multi-sensory Learning

It doesn't matter how you learn as long as you use the methods which suit you. However, a combination of the use of all the senses is the best way to learn.

It appears that on average you will remember:

- 20% of what you read;
- 30% of what you hear;
- 40% of what you see;
- 50% of what you say;
- 60% of what you do.

But you will remember 90% of what you say, hear, see and do.

Multi-sensory learning can help anyone to enhance the experience of learning and improve recall of important information. Information is received by the brain through the sensory channels. These channels are:

- Visual (seeing information)
- Auditory (hearing information)
- Kinaesthetic (touching, moving or doing)
- Olfactory (smelling and making associations related to smell)
- Taste (what we experience from the mouth and tongue)

Consider how strongly a smell, taste or hearing a piece of music can remind you of a previous situation or event. This is because all your sensory channels have worked simultaneously to link into your emotions to create that experience.

Multi-sensory learning involves activating as many of the senses as possible at the same time to aid understanding and recall.

Other study tips for effective learning

- Remember to take regular breaks.
- Create or choose an environment which suits your learning needs:
 - limit noise and distraction;
 - room temperature is not too hot or too cold;
 - comfortable seating arrangement;
 - good lighting.
- Break large tasks into smaller manageable chunks.
- Eat regularly and drink plenty of water.
- Use technology to help you:
 - Personal Computer;
 - Tape, digital or minidisk recorders;
 - Assistive software.

Time Management and Organisation

Misuse of time is probably the most common form of sabotage that students use to undermine their attempts to study. However, planning your time makes you think about it strategically and, even if you have to alter your study plans, you will benefit from having previously defined your tasks and prioritising your activities.

Common Time Problems	Possible Solutions
Are you disorganised and frequently misplace things?	Organise your learning space. Take control of where you work and you can then control how you work. • Keep a clear desktop • Place pens, pencils etc in a desk tidy or jar • Organise your notes by using a separate ring binder for each subject • Use coloured dividers to separate lecture notes into date order • File handouts with the appropriate lecture notes
Put off doing coursework and assignments	• Use a diary or wall planner to clearly mark assignment deadlines for every module • Start tasks sooner rather than later • Be realistic about how long things will take and set appropriate time slots for specific tasks e.g. planning an essay will take longer than reading a short extract • Break tasks down into manageable parts and allow time to tackle some of it every week
Easily distracted	• Negotiate study time with friends and flatmates so that they know when you are not to be disturbed • Be aware of the times of day you can learn and concentrate • Set clear start and finish times for each study session • Take regular short breaks
Over commitment and leaving things to the last minute	• Try not to over commit your time • Plan social time into your week and mark clearly in a diary or wall planner • Prioritise tasks; do the most urgent tasks first

Remember you are expected to be an independent learner at university. Therefore, make sure that you take control of your time and use it effectively.

Study / Revision Planner

Week beginning//

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
8-9 a.m.							
9-10 a.m.							
10-11 a.m.							
11-12							
12-1p .m.							
1-2 p.m.							
2-3 p.m.							
3-4 p.m.							
4-5 p.m.							
5-6 p.m.							
6-7 p.m.							
7-8 p.m.							
8-9 p.m.							
9-10 p.m.							
10-11 p.m.							

Making and Using Notes

Being able to make good notes efficiently is a key skill for studying at university.

You will need to make notes in different situations: in lectures, seminars and tutorials; when working in groups; when planning and writing essays; on field trips and placements and when revising for exams.

Putting into practice suggestions in this guide will help you to:

- Note important information for use in your academic studies including essay writing and revision;
- Keep a record of your learning and where you obtained your information from;
- Plan and organise essays, assignments and presentations;
- Focus on a specific subject and remember key facts;
- Revise effectively for your exams.

General note taking tips

- Note the date, subject and page number at the top of each page;
- If you are in a lecture, seminar or tutorial, note the name of the lecturer or tutor;
- If you are making notes when working in a group, note the names of your colleagues in the group;
- It is important to note the sources of your information;
- Use A4 paper. Put different headings for main subject areas on separate sheets of A4 paper. You can then file these notes straight away (or when you have made notes on these sheets you can file them straight away);
- Use the margin. You can put references in the margin, note keywords, indicate if you have handouts on the subject or add information later;
- Leave blank spaces on your page; after each note for example. The 'visual image' of notes and blank spaces may help you remember the information you have recorded. If necessary you can use the space to note information you wish to add later;
- Use a system. Number and/or label your notes with headings and subheadings. Use indentations and bullet points. The visual image you have of your notes may help you to recall the information they contain;
- Try using highlighters to pick out key words and phrases. Write main points with a coloured pen or underline them with colour. Some people draw pictures or diagrams to aid their recall;
- Link related notes by using arrows, lines, brackets, enclosing them in a rectangle or any other technique you find helpful.

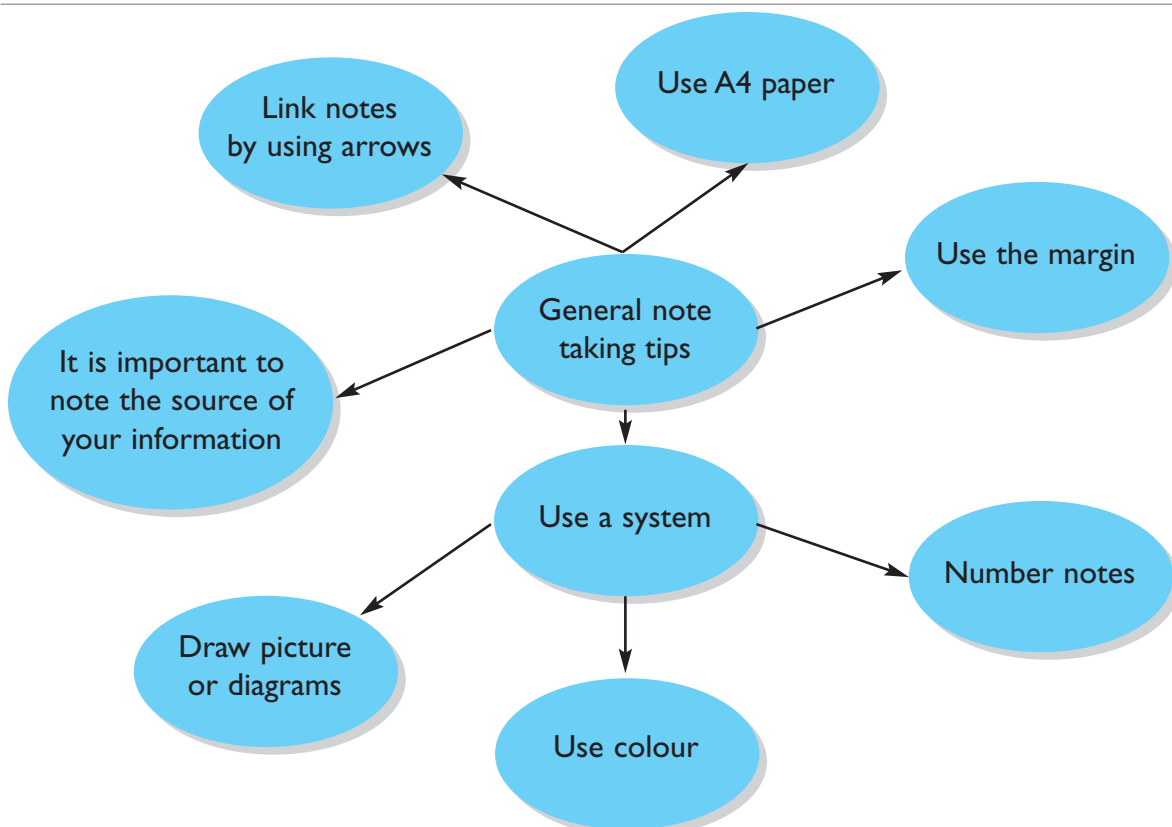
Note taking methods

It is important that you choose a note taking method which suits your learning style. Consider whether you prefer linear methods or visual formats such as spider diagrams.

Linear methods

29.8.03	Note taking Mr Smith	Two column method	
	Linear note taking		
	1. use a number strategy		Main idea Place the main idea or heading in the left hand column
	2. list key information		
	3. don't try to write down every word		write the further details in the right hand column
	4. use abbreviations		
	5. use the margin to make a note of the date		
	6. use the margin to list key words and references	Subject	_____

Spider diagrams



Lectures

- When making notes in lectures, don't try to write down everything the lecturer says, not even whole sentences. Note phrases, main points and key words;
- Use symbols and common abbreviations, your own abbreviations and subject specific abbreviations;
- Do take down quotations and phrases exactly;
- Be aware of a lecturer signalling an important point by use of body language and emphasising or using particular words or phrases by standing up, looking up, pausing, using a louder or quieter voice. By saying eg:

“There are a number of theories as to the possible causes of dyslexia. They are.....”

“The important factors are.....”

- If you are unsure that what you have noted is correct or if you do not understand a particular point, put a ? in the margin and check with the lecturer, in your books or with a fellow student later.

Making notes from books

- The key is not to copy down chunks of text from a book. Your aim is to make clear notes using a few of your own words. You may also wish to note your own ideas that have been stimulated by text you have read;
- Be selective. Write down the main subject and important headings before you start, then fill in notes on these areas;
- Focus on the essay title. Keep referring back to this and make sure your notes are relevant;
- If you come across information you think may be useful in a different subject or essay, make a separate note of the reference and return to it later, at the appropriate time;
- Don't write the same information down twice. If more than one author makes the same or a similar point, note down the references for the work of the 2nd, 3rd author in the margin next to your notes on the work of the 1st author;
- It is useful to read through specific chapters, handouts or other information before a lecture. Note down obvious subject headings and leave blank spaces to fill in with your lecture notes.

Organising your notes

- Read through and check your notes soon after you have written them, preferably on the same day. Follow up any points you need to; information you may have missed out or did not understand. Check references and key spellings;
- File notes as you have made them;
- Use colour codes: different coloured files for different subject areas, coloured file dividers for sub-sections of a subject;
- File related information with your notes: handouts, photocopies of journal articles, newspaper and magazine cuttings, and references to notes from different but linked areas of study;
- Develop a filing system that is easy for you to use and refer to when planning and writing essays, and revising for exams.

Other useful tips

- Use a visual image or picture on the front of your files/notebooks relating to your topic area. This will help you quickly identify the subject area in the file;
- If you save information to CD or disk try to use a coloured CD or disk that matches the colour of your file. For example, if notes for Latin American studies are filed in a red folder, use a red CD or disk.

(Kate Henderson, 2004)

- Use this space for noting your own tips and strategies

Reading Skills

Aim to develop your reading skills to help assimilate information and understand ideas.
Reading is simply a tool which helps you access the thoughts of others.

Academic reading will require you to:

- Identify arguments;
- Recognise whether they support or oppose the main premise;
- Identify the evidence;
- Identify conclusions and whether the evidence supports the conclusions;
- Be a critical thinker.

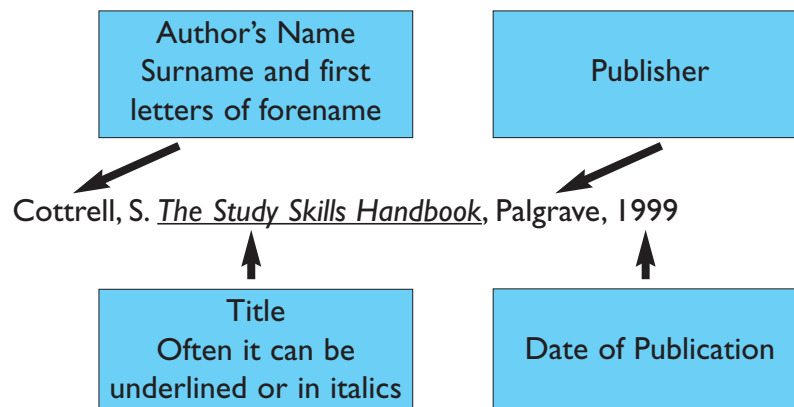
Information Searching

Reading for study is time consuming and tiring. Therefore, before you begin reading ask yourself:

- What information do I need to find?
- Will this text provide the information I need?

To decide if a text book contains the information you need use the clues provided in:

- Contents page;
- Preface;
- Index;
- Introduction;
- Chapter headings;
- Illustrations and diagrams;
- Section headings;
- Summaries;
- Reference section.



S Q 3 R

To improve reading comprehension the SQ3R technique is recommended. Applying SQ3R will slow you down when reading but with practice you can establish good, productive habits which will improve your recall and comprehension. Remember, effective reading is not fast reading.

Survey

Skim the whole book or relevant chapter to get an overview of the text. This will provide your brain with a frame of reference for the information it will be receiving.

Question

Is this really the information you need? Are there any words, technical terms or phrases that you do not understand? Check unknown meanings at this stage to avoid a break in your concentration when you read the full text.

Read

Read slowly and be aware when your concentration goes. Read in short bursts with frequent short breaks if necessary. Try to visualise what you are reading or close your eyes and picture the layout of the page.

Recall

Stop at the end of each paragraph or page and say out loud, in your own words, what you have just understood from what you have just read. This will help monitor your comprehension of the subject.

Review

Take notes. Note taking is an active form of memory and ensures you make a connection with what you are reading and understanding.

- Annotate your text with your own notes;
- Label or reference key chapters and pages;
- Underline or highlight key words or facts on each page;
- Use coloured highlighters to identify the different arguments;
- Summarise out loud and then make notes using your own words;
- As you find the answers to questions, write them down.

Clue words to help you read

Continuation signals – warning! There are more ideas to come	and again furthermore secondly last of all a final reason	and finally likewise first of all in addition similarly one reason
Change of direction signals – watch out we are doubling back	although however conversely in spite of in contrast but	despite nevertheless yet on the contrary the opposite
Sequence signals – there is an order to these ideas	First, second last A B C for one thing	next in the first place before after
Illustration signals – here is what that principle means in reality	For example For instance Such as	to illustrate much like similar to
Emphasis signals – this is important	A major development A key feature A distinctive quality Important to note a primary concern a central issue	a significant factor a major event especially important the basic concept the chief outcome especially relevant
Cause, condition or result signal	because therefore consequently	so that thus yet
Spatial signals – answers the ‘where’ question	between opposite next to alongside	here beyond right adjacent
Comparison or contrast signals – compare idea A with idea B	either or less rather analogous to more than but same	less than much as different from better but opposite however half
Conclusion signals – ends the discussion and may be important	As a result From this we see Last of all Consequently	Hence in summary in conclusion finally
Fuzz signals – idea not exact or author wishes to qualify statement	almost maybe except seems like sort of	was reported probably purported looks like alleged

Many learners, particularly those with dyslexia, may experience the following difficulties when reading. Some suggested solutions are given in the following table.

Problem	To alleviate the problem
Glare from white paper or text blurs, distorts or jumps about	Try using a coloured acetate or coloured plastic folder over the text to remove glare.
Print size makes it difficult to concentrate or focus on reading	Use a photocopier to enlarge text Scan text onto a PC and enlarge
Difficulties understanding a particular section of text	Read the section aloud Ask a friend to read it aloud to you Scan text into PC and use read back facility in TextHelp Read & Write to listen to the words.

Essay Writing

Essay writing is time consuming, may be frustrating and is generally hard work. This section has been devised to help you to develop your essay planning and writing skills.

Essay writing requires:

- Analysis and an understanding of the question;
- Research – reading and collating relevant evidence;
- Evaluation to ensure identification of the main arguments has been made;
- Planning – creating a logical structure of information and ideas;
- Writing;
- Referencing;
- Proof reading.

The essay title

Essay titles include key verbs and words which inform you of how the question must be answered. It is therefore important that you understand the question before you begin to write.

- Key verbs are the instructional words which tell you how the question must be answered;
- Key words provide the framework for your answer.

Sample question:

‘Discuss the relevance of class in the analysis of recent social movements in Latin America.’

Key Verb

- Discuss. This word instructs you to investigate or examine by argument or debate.

A list of key verbs often found in essay titles is provided on the next page with a description of how each one should be interpreted.

How to identify key words

- The subject word (class)
- Look for place/location (Latin America)
- Look for a time element (recent)

Identifying Key Verbs in Essay Questions

Identifying the key verbs in a question is essential before planning your answer. The following list shows subtle, but important differences between the common key verbs.

- Analyse Break up into parts, investigate.
- Compare Similarities and differences – perhaps reach a conclusion to show your preference.
- Contrast Show differences.
- Define Set down meaning of word or phrase.
- Describe Give detailed account.
- Discuss Investigate or examine by argument or debate.
- Distinguish Show the differences between.
- Evaluate Give your judgement – back by discussion of evidence.
- Examine Look closely into.
- Explain Make plain – interpret. Give reason for something.
- Interpret Make clear – show the meaning of.
- Justify Show adequate grounds for decisions and conclusions.
- Outline Give main features or general principles.
Leave out minor details. Emphasise structure and inter-relations.
- State Present in a brief, clear form.
- Summarise Give a concise account of the main points.
Leave out details and examples.
- Trace Follow the history or development of a topic from point of origin.

Research Skills

Researching information can seem an impossible task. Therefore, knowing how and where to find relevant information are the key steps to acquiring good research skills.

Where to find relevant information

- Course reading lists;
- Journals and periodicals;
- Internet;
- Special text collections.

How to select the most relevant information

- Check to see if there are any texts on your reading list that have been marked as essential reading;
- Check the date of publication;
- Scan contents, reference sections and introductions to check if the book contains information you need and to look for the most relevant chapters;
- Use Library catalogues to find the most recent journals in your subject area;
- Use reliable sources, e.g. well known journals;
- Select the most up-to-date material;
- If uncertain, clarify information with your lecturer or supervisor.

Navigating in the library

All texts books and journals in the library are shelf referenced using the Dewey system. You will find journals and books are stored in separate areas. Once you know the shelf reference for your book use the guides at the end of each row to help you locate the correct shelf.

Politics Journals	Economics Books
Politics Per 320C-H Row 9	Economics 331.409-333.7 Row 51

If you have difficulty locating texts, journals and periodicals and using computerised catalogue systems, staff on the information desks are always willing to assist you. If you cannot find the shelf location for books and journals, don't be afraid to ask a member of staff to take you there.

Planning

It is advisable to break down the large, complex tasks of producing a long piece of writing into manageable, smaller chunks.

Use the following checklist to help you keep track of your progress.

- Examine the question

This should include your first thoughts, asking yourself what you already know about this topic.

- Re-examine the question

Do you really understand all the terms used and have you highlighted the key verbs?

- Identify gaps

What else do you need to know or to find out before you are able to answer the question?

- Prioritise tasks

How long will it take you to get the information you need? Do you need to work with others or see your lecturer to clarify information at this stage? Act now to keep your attitude positive – don't let little snags become reasons for not working.

- Set realistic targets

You will not write a good essay quickly. It is also very unlikely that you will be able to write coherently without a plan. Remember, give yourself enough time to think and organise your thoughts before you start to write.

- Complete reading and note taking

Set yourself a deadline for completion of background reading and research. Make sure you take adequate notes and make a note of references for your bibliography or reference section.

- Devise your plan

Use any method you wish to provide yourself with a framework for your writing. Make sure you are aware of word limits. Before you start to write you should have a good idea of the main topic of every paragraph or section.

Remember, do your thinking before your writing.

Structure

Remember, the rule is one idea per sentence and one topic per paragraph. Also keep referring back to your plan to make sure that what you are writing is relevant and answers the question.

Introduction

The purpose of an introduction is to provide the reader with an outline of the main arguments.

- Outline the main theme or premise;
- State the purpose of the essay;
- Summarise background information.

A Guide to Paragraph Structure

The guide to paragraph structure below may help you to produce a logical flow of information in your written work.

1. Your first sentence should outline the topic of the paragraph.
2. Then add detail.
3. Include relevant examples or evidence.
4. End the paragraph with a brief concluding sentence.

Example

1 It has always been thought that the main diet of grey seals was cod, but what do they really eat? **2** In the UK the Sea Mammal Research Unit (SMRU) funded by the Department for the Environment, Food and Rural Affairs (DEFRA) has a statutory duty to provide scientific advice to the government on the management of seal populations. Commissioned research carried out by Hammond et al., (1994) in the Inner and Outer Hebrides found sandeels to form the major part of grey seal diet, while other prey such as cod played a smaller role, salmon consumption was found to be insignificant.

3 It was estimated that 1 000,000 tons of fish are removed by the effort of man and marine mammals in these areas. Estimates for seabird predation are 70,000 tons, seals 120,000 tons and cetacean predation 160,000 tons. Man harvests the rest but shockingly, indigenous local fleets take only 25,000 tons, whilst the European Union (EU) fleets and discard make up the rest of the figures (Scottish Sea Fisheries Statistical Tables, 1980 – 97 cited in Thomson).

4 With competition intense for these limited resources the government through the SMRU, has to be seen to be doing something to appease the fishing industry.

Writing Conclusions

- Summarise the main arguments;
- Try not to repeat what you have already written;
- Show how your arguments and/or examples are relevant to the essay title. Make sure you end your conclusion with a strong sentence, giving your final view.

Useful Words and Phrases

It can sometimes be difficult to think of the correct word or phrase to start a new sentence or paragraph. The words and phrases listed below may help.

To introduce a similar idea	Also Besides Furthermore In addition Too	Moreover Another An additional Supplementary evidence suggest
To compare things	Also Similarly And both But also Similar to	Likewise Too And not only Neither, nor
To introduce an opposite idea	However, Instead Nonetheless On the contrary Whereas Despite	This differs from In contrast Nevertheless On the other hand Although
To introduce an example	For example Such as An example of	For instance Like
To emphasise	In fact Indeed	To reiterate
To introduce an alternative	Otherwise If	Or Unless
To signal chronological order	First First of all Next Gradually Finally	Second Then Meanwhile Last
To indicate order of importance	Above all Most importantly Primarily Significantly	The most important First and foremost A more important
To introduce a cause or reason	For Since Because of Due to	The consequence of The effect of As a result
To introduce an effect or result	Accordingly As a consequence Hence Therefore	As a result Consequently Thus
To conclude	In conclusion Indeed All in all In summary	In brief It is clear that The evidence suggests These examples show that

Report Writing

A report is a formal piece of written work and presented in a different style from an essay. Reports are usually written for a clear and specific purpose and are likely to be aimed at a particular person or group of people. A report may need to make recommendations for action. The structure of a report is more detailed than an essay with the use of headings and sub-headings to introduce pieces of information. You may find it helpful to consider the following areas when report writing: Planning, Research, Structure, Writing and Language.

Planning

Answering these questions will help you in planning your report and organising your work:

Who	• Who has requested you produce the report? • Who is it aimed at/will be reading it? • Who might be required to follow up any suggestions or recommended actions in the report?
Why	• Why is the report being produced? • Think about the purpose of the report and possible outcomes.
What	• What are the terms of reference or aims of the report? • The terms of reference or aims will identify what the report should be about, the range of what it should cover. • It is likely that the terms of reference or aims may be defined by whoever is requesting the report eg. Supervisor or tutor. • What are the objectives of the report? What might be expected as a result? It may be a conclusion, recommendations and/or suggested actions.
When	• Timescale – keep in mind your deadlines • Identify a realistic timetable. • Schedule deadlines for obtaining information from external sources eg. interviews, data provided by others, as well as from your own research.
How	• The structure of your report may be governed by your subject. Scientific, medical, laboratory, engineering, management, business and placement reports (and others!) may require different formats and are likely to require different types of information. • Your report will need to follow a logical sequence with clearly identified sections for different subject areas/parts of the report. • You will need to use headings and sub-headings and possibly a numbering system. An example is given below: I Introduction - I.1 The problem - I.2 The purpose of the Research - I.3 Objectives • You do not need to write each section in the order of the planned structure of the report. Write different sections as you have the appropriate information, you can order it later. • Be aware that the format of your completed report may change from your original planned format.

Research

- **Method(s) of research**

- Interviews
- Questionnaires
- Tests
- Experiments
- Audio-visual material
- Accessing information from books and journals

- **How to conduct research**

- collecting appropriate and sufficient evidence
- writing style and conventions

- **Aim to achieve:**

- accuracy
- objectivity
- reliability
- validity

Report structure

Your course handbook or tutors may provide guidance on the structure of reports for your field of study. If this information is not provided follow the order below.

- Title Page
- Acknowledgements
- Contents Page
- List tables and illustrations
- Abstract - briefly outline your report with the conclusions
- Introduction - outline research in this area and its significance within the content of your report.
- Literature Review - discuss the most important/relevant and up-to-date research linked to your research and introduce arguments supporting or opposing research opinion.
- Methodology - a description of the research methods you used
- Results - state the main findings
- Analysis of results - discuss the main findings, analysing results against the research covered in your literature review. Do the findings agree or disagree with those findings?
- Conclusions
- Recommendations
- Appendices
- References - a list of authors or sources cited directly in your text.
- Bibliography - a list of the general reading material you have used.
- Glossary

Science Writing

Producing a piece of written work for a science-based subject usually requires a particular style and use of language. The aim is to be factual and report observations and conclusions based on a logical evaluation of research. Avoid using descriptive or potentially ambiguous language.

Report format

- Aims
- Introduction
- Method
- Results
- Analysis
- Discussion
- Conclusion

You should also consider the following points when assessing results from existing research:

Analyse the arguments:

- Are the arguments based on theory or experiments?
- Can the sources used be easily identified?
- Are the concepts defined?
- Look for evidence to support each of the arguments;
- Identify strengths and weaknesses in arguments.

Look at the methods used and consider:

- Sample size;
- The control of variables;
- Reliability of evidence/results;
- Validity;
- The adequacy and accuracy of techniques used;
- Was the methodology objective?

Question the conclusions:

- Are the conclusions logical?
- Is there adequate evidence to support the results?
- Do the results lead to any important or significant findings?

Other points to remember

- Be concise - put down the facts and avoid irrelevant details;
- Use diagrams - these can reduce the amount of words you need to use;
- Split the text into sections under headings;
- Read other science reports for your subject to gain an understanding of the tone, style and presentation required;
- Check that you have used the guidelines or examples provided by lecturing staff - especially referencing style;
- Start practical work as soon as possible to allow sufficient time to observe and collate your information and to consider the significance of the results.

Key Verbs

Sometimes changing the wording in a sentence can help you to express what you mean more clearly.

Example: **‘There was not a big change in weight’ can be expressed more effectively as ‘There was no significant change in weight’.**

The following verbs may be useful when you are writing a science report.

• Indicate	The figures indicate that...
• Represent	The blue line on the chart represents...
• Illustrate	The test illustrates the importance of...
• Prepare	The solutions was prepared for the test...
• Produce	The machine was produced by...
• Compose	The solution composed of X and Z...
• Form	The fossils were formed inside...
• Process	The information was processed...
• Determine	The right density will be determined...
• Operate	The battery operated the device...
• Calculate	The numbers were calculated...
• Maintain	The solution maintained its temperature...
• Monitor	The experiment was monitored...
• Sample	Solution A was sampled...
• Stabilise	The temperature was stabilised...
• Measure	The correct height was measured...
• Removed	The impurities were removed...
• Apply	The gel was applied to the side...
• Suggest	The result suggested that...
• Estimate	The figure for that year was estimated...
• Observe	The change in colour was observed...
• Absorb	The material absorbed the liquid...
• Require	The research required more funding...
• Release	The rat was released from the cage...
• Modify	The formula was modified...
• Preserved	The remains were preserved in the lab...
• Specimen	A good specimen was chosen for...
• Substance	These substances were tested...
• Property	The rock’s unusual properties are...
• Compound	It was a compound of materials...
• Quantity	The quantity of materials was measured...

Dissertation Structure

Your course handbook or tutors may provide guidance on the structure of your dissertation for your area of study. If this information is not provided follow the order below.

- Title Page
- Abstract - briefly outline the content of your dissertation and the main conclusions
- Acknowledgements
- Index
- Introduction - outline the aim of your dissertation, the main research in this area and its significance which supports your reasons for investigating the subject.
- Literature Review - discuss the most important/relevant and up-to-date research linked to your research and introduce arguments supporting or opposing research opinion.
- Methodology - a description of the research methods you used
- Results - state the main findings
- Discussion - discuss the main findings, analysing results against the research covered in your literature review. Do the findings agree or disagree with those findings?
- Conclusions
- References - a list of authors or sources cited directly in your text.
- Bibliography - a list of the general reading material you have used during your research of this topic .
- Appendices

Writing a Literature Review

A literature review should be:

Analytical, critical, important, evaluative and relevant to your area of study

A literature review should cover:

- Recent or relevant research in your area of study;
- Identify contrasting views;
- Describe research methods used in previous studies.

Make sure that you:

- Critically evaluate previous research;
- Determine the strengths and weaknesses of previous research;
- Decide whether previous research results are valid;
- Discuss the relevance of previous research to your area of study.

Sources of information

- Books
- Journal articles
- On-line data bases
- Web pages

Skills required

- Knowledge of how to search using computer data bases;
- Knowledge of data collection methods;
- An understanding of the research methods used in your area of study;
- To be able to identify comparisons and list them;
- To organise the arguments;
- Awareness of plagiarism;
- Accurate referencing.

Try to avoid

- Adding too much detail;
- Writing long, rambling sentences which may confuse the reader;
- Making it too vague;
- Including irrelevant information.

The volume of reading required for a literature review may be high. Therefore you might find the information on making notes and reading skills covered in this guide helpful.

A Critical Approach to Writing

At University you will be expected to critically evaluate existing research knowledge. To show you understand how different arguments are constructed you should:

- Look at the date of the publication. This may help you decide if the literature is up-to-date and relevant to your area of study;
- Look for the main argument;
- Look at the reasoning behind the argument;
- Does the argument support the author's conclusions?
- Look at the type of evidence the author has used to support their argument;
- Is the evidence strong or weak?
- You should state why the evidence is strong or weak;
- Compare and contrast the different arguments;
- Compare the conclusions. Do different authors agree or disagree?
- Be prepared to state why different authors have reached different conclusions.

To help detect hidden bias in texts you should be aware when you are reading that opinions can be communicated by:

- Strong visual imagery;
- Reference to leading authority;
- Use of convincing language.

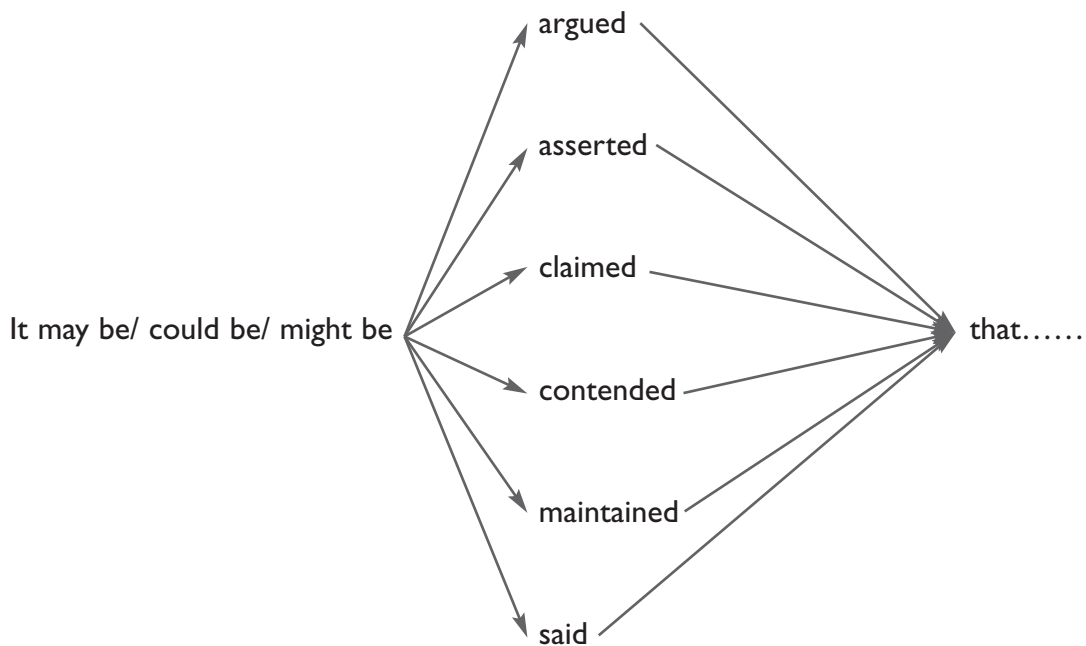
You should

Make sure your own opinion is supported by reliable evidence and/or authority.

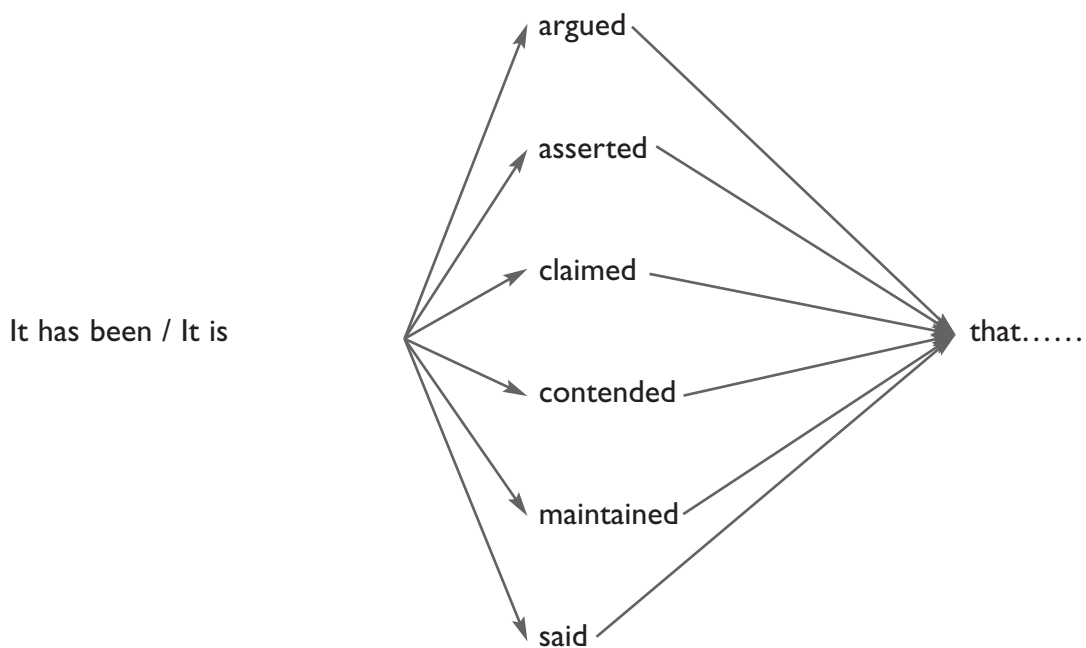
Signal Words

Make sure your own opinion is supported by reliable evidence and/or authority.
It is important that you develop your own arguments and conclusions.

Signal words to show your own opposing opinion:



Signal words to use to show opposing opinion from another source:



A Basic Guide to Referencing

It is important that you accurately reference your academic work both within the text and in a bibliography or reference section at the end of your work to avoid losing marks and accusations of plagiarism.

How to reference using the Harvard system

Book	Journal
- Name of author(s)/ Editor(s) - The year of publication (placed in parentheses) - The title of the book - The name of the publisher Cottrell, S (1999) The Study Skills Handbook. PALGRAVE	- Name of author(s)/ editor(s) - The year of publication (placed in parentheses) - Title of the article - Title of the journal - Volume/ issue number - Pages Chinn, S (2003) Does Dyscalculia Add Up? Dyslexia Review, 14 (3), pp. 4 - 8
Referencing in Text	
When referring directly to an author: In her book, Cotrell (1999) advises... When referring to a particular issue/argument put forward by an author: It is argued that references (Cottrell, 1999) are needed...	

How to reference using the British Standard

Book	Journal
- Name of author(s)/ editor(s) - Title - Publisher - Year of publication Cottrell, S.The Study Skills Handbook. PALGRAVE, 1999.	- Name of author(s) - The article title - The journal title - Volume/ issue number - Year of publication - Page number(s) Chinn, S. Does Dyscalculia Add Up? Dyslexia Review, 14 (3), 2003, pp. 4 - 8
Referencing in Text	
You should use the author's name and then number the order it appears in your text in one of the following ways: - In her book, Cottrell (1) advises... - In her book, Cottrell [1] advises... - In her book, Cottrell 1 advises... The complete reference should then appear at the foot of the page or end of a chapter. ¹. Cottrell, S.The Study Skills Handbook. PALGRAVE, 1999.	

You will also find referencing less time consuming if you make an accurate note of the reference on a separate piece of paper or index card as you read and research information for essays and assignments.

You must also remember to:

- Put references in alphabetical order;
- Note the order of information;
- Note the use of punctuation;
- Note the type face and style;
- Group together referencing sources in your list, e.g. all books then journals etc.

Plagiarism

Plagiarism is defined as the unacknowledged use of another person's ideas, words or works either verbatim or in substance without specific acknowledgement.

You might be accused of plagiarism if you:

- Do not correctly reference your sources;
- Copy the work of others word for word;
- Use other people's ideas without acknowledgement;
- Copying another student's work;
- Using words or sentences from other people's work. Even if you have changed the order it will still be plagiarism;
- Submit work you have asked someone else to write for you.

Tips to help you avoid plagiarism:

- Use your own words, no matter how poor you believe your written skills to be;
- Avoid using too many quotations;
- Accurately reference your sources;
- Do not copy down information word for word;
- Use a different coloured pen to copy quotes or when writing any other information down word for word. It will help you to identify the extent to which you are copying;
- Write your notes in your own words. Read a passage and then cover the page and summarise out loud in your own words, then make your own notes;
- If you omit words from a direct quote indicate this by using three dots inside parentheses (...).

Examinations

Failure in examinations can be attributed to exam nerves or as a result of the negative effects of stress. However, it is usually poor preparation and planning which results in exam failure. It is therefore important that you take control and organise your time and employ strategies to ensure better performance in examinations.

Revision

Getting started:

- Draw up a realistic revision timetable – this should include some social time to allow you to relax;
- Organise your notes by module or topic – if you have followed advice in the Note Taking section, you will find getting started on revision easier;
- Decide what topics to revise;
- Use past exam papers to guide your revision;
- How many questions do you have to answer for each paper?
- Use past papers to practice writing answers to exam questions;
- Be positive about your learning;
- Ask tutors for help or to clarify information if necessary.

Memory

Recall of information is essential for successful performance in examinations. Better recall can be achieved by time management of study periods and regular over learning.

- Try to keep concentrated study to no more than 40 minutes at one time;
- Take regular short breaks;
- Over learning is essential for recall of information:

- After each break spend 10 to 15 minutes reviewing work covered in the previous study period

- Review again after 24 hours

- Be aware of when your concentration slips – it may be shorter than 40 minutes;
- Find a quiet place to work to avoid being distracted during revision periods;
- Make sure you drink plenty of water to keep your body hydrated and eat regularly.

Try one of the following techniques to help make information memorable

- Use multi-sensory methods – write it, say it, see it, hear it;
- Use Survey, Question, Read, Recall, Review, when reading through text;
- Summarise key information onto one page using coloured paper;
- Use mind maps;
- Put key information into poster format and stick on your wall;
- Use coloured pens to highlight important facts, to link ideas or to separate arguments;
- Use technology – TextHelp Read & Write programme allows you to hear and read information simultaneously;
- Record your revision notes or answers onto tape or disc. Hearing the information may help you to remember it;
- Group revision – you may find it helpful to spend some time revising with friends.

Timed examinations

- Make certain you know where all of your exams are being held in advance of the start time;
- Organise pens, pencils, rulers etc. the night before;
- Don't let other people panic you and if necessary avoid them.

In the exam

- Before you turn over the exam paper, write down key dates, definitions, quotes names or other information you feel you may forget;
- Read the instructions on the question paper carefully. They will tell you if there is a compulsory question and how many questions you must answer;
- Scan through the paper and tick all questions you could answer;
- Calculate the time needed to answer each question and the order you wish to attempt them;
- Read each of your selected questions carefully underlining key words or phrases. Also check how many parts there are to each question;
- Plan your answer to the first question and write it. Keep to the plan and avoid including information which is not relevant;
- Plan your answers for all the remaining questions to avoid panic towards the end of the exam.

Remember

- Write in short clear sentences;
- If you forget a word, spelling or chunk of information, leave a gap and come back to try to fill in the detail later;
- Make your writing legible;
- Less information and evidence is needed in comparison to course work;
- Essays are shorter;
- Allow time for proof reading.

Preparing for Oral Presentations

Factors to consider when you are preparing and delivering oral presentations:

Audience

- Who are your audience?
- How many will be in the audience?
- What knowledge might the audience already have?

Material

Time restrictions shape the content of your presentation. Therefore, divide your information into the following categories:

- Information the audience must have;
- Information the audience should have;
- Information that is not essential but which might be useful in addition to main points.

Preparation and Speaking from notes

- Write key words or phrases on prompt cards;
- Bullet point main heading and write brief notes beside each point;
- Use coloured card or paper for each main point (colour being a strong visual memory aid);
- Make sure your writing is large and clear.

Finally

- Rehearsal - practice your presentation.

How are you going to present your information?

- If you use overheads (OHTs) or powerpoint stop talking for a few seconds and give your audience time to read each slide;
- Speak clearly;
- Don't rush or speak too fast. Pause and moderate the tone and volume in your voice;
- Eye contact is important. Therefore, don't be afraid to look at your audience. (tip - look just above their heads);
- Don't stand with your hands in your pockets; fiddle with your hair or any other mannerisms which might distract audience attention.

Spelling, Grammar and Punctuation

The following is intended as a brief guide to basic spelling and grammar rules and punctuation.

Basic Spelling Rules

The 'building blocks' of English words are the vowels

a e i o u

These vowels have 2 sounds – long and short

acorn/ ant
evening/ egg
iron/ ink
open/ on
university/ up

But **y** is unusual because it can be used both as a vowel and a consonant. The letter **y** is used to replace the letter **i** in words of English origin that end with a long or short vowel **i** sound as in happy, cry, baby. But for words such as yellow, yolk, yacht the **y** is used as a consonant.

The simple word no, contains a consonant (n) and a vowel (o). The vowel in this word sounds long because it is not blocked in by a consonant coming after it.

The word not, contains a consonant (n) vowel (o) and consonant (t). The vowel in this word sounds short because it is blocked in by a consonant coming after it.

However, if you want to say note, you need a way of lengthening the vowel sound whilst keeping the (t) sound at the end of the word. We add an (e) to the end of the word to enable the vowel (o) to sound long. Therefore, if there is only one consonant separating 2 vowels then the first one will sound long.

Examples of this rule are: Hope/ Hop
 Scrape/ Scrap
 Dine/ Dinner

Using the ie rule

The standard rule is i before e except after c. This rule creates a long **e** sound as in niece and receive.

Words using the ei letter combination creates a long **a** sound as in eight, weight, sleigh, foreign, vein, their, freight, neighbour.

Using the -ce/se rule

The rule is c for a noun as in advice and practice.
Use s for a verb as in advise and practise.

Multi-sensory techniques for spelling

If you regularly experience difficulty with a particular spelling or course-related words try employing the following multi-sensory technique. Remember by activating all four senses at the same time will help you to be able to learn and recall spellings. Strategies should employ the use of colour, shape or symbol representation to help make the word more memorable.

Word	Strategy	Meaning
Picasso	Pic / ass / o 	Artist's name
though through thought	though th / r / ough though / t	Despite the fact that Going in at one side and coming out another Past tense of to think

Key stages

- Look at the word and say the strategy;
- Say the word and then say the strategy;
- Cover the word and the strategy;
- Say the word, say the strategy and picture the strategy;
- Write the word, saying the strategy as you write it;
- Check letter by letter to make sure you have written what you intended.

(Adapted from the Multi-sensory Spelling Programme devised by Jenny Lee)

Basic Rules of Grammar

The base rule is that each sentence must contain a subject and verb element. A basic example of this is:

The world consists of many different cultures.
 ↑ ↑
 subject verb

- The subject element is who or what the sentence is about.
- The verb element provides the action or process in a sentence.

Information can be expanded in a sentence by using commas, and, but, or.

Examples: A novel makes the reader see connections among various phenomena and look at something in a way never thought about before.
 Data was collected in early February 2003, during mild winter conditions.

Punctuation Guide

Full Stop .	Identifies the end of a sentence
Semi-colon ;	Indicates a break or in place of and Used to separate items in a list
Colon :	Used to separate a statement from an explanation Used to introduce a list
Comma ,	Used to break clauses in a sentence or mark a list or run of phrases
Bracket () and []	() Used in place of commas or for referencing [] Used by you, the writer, to clarify or comment
Hyphen -	Used to connect compound words e.g. multi-sensory
Dash –	Used in place of brackets To separate dates or numbers, 1999 – 2002, 40 – 50%
Apostrophe ‘	To show possession (the man’s hat) plural (the managers’ reports) Used when words are contracted (can’t)

Information Technology

Using information technology is an important part of study at university. To support computer based learning for students with dyslexia, dyspraxia or other Specific Learning Difficulties the University of Newcastle has networked the following specialist software packages:

- **textHELP® Read & Write**
- **Inspiration®**

The University Computing Service (UCS) recommends that you go to the website <http://www.ncl.ac.uk/iss/software> to check the location of all UCS managed software.

How textHELP!® Read & Write and Inspiration® can help you in your studies.

textHELP Read & Write is a specialised tool bar that works within Windows based applications such as word processing, Email, spreadsheets and the Internet. Read & Write has the following facilities:

Speech - It can be set to read out loud as you type each word, sentence or paragraph. It also provides full screen reading of text, menus and icons.

Spell Checking - An advanced phonetic spell checker can help the user correct the most complex errors and notify you when a mistake is made.

Homophones Support - homophones are colour coded to help to proof read and correct text. Descriptions of like sounding words are provided to ensure the correct word is selected.

Word Prediction - phonetic and grammar based word prediction will offer suggestions as you type.

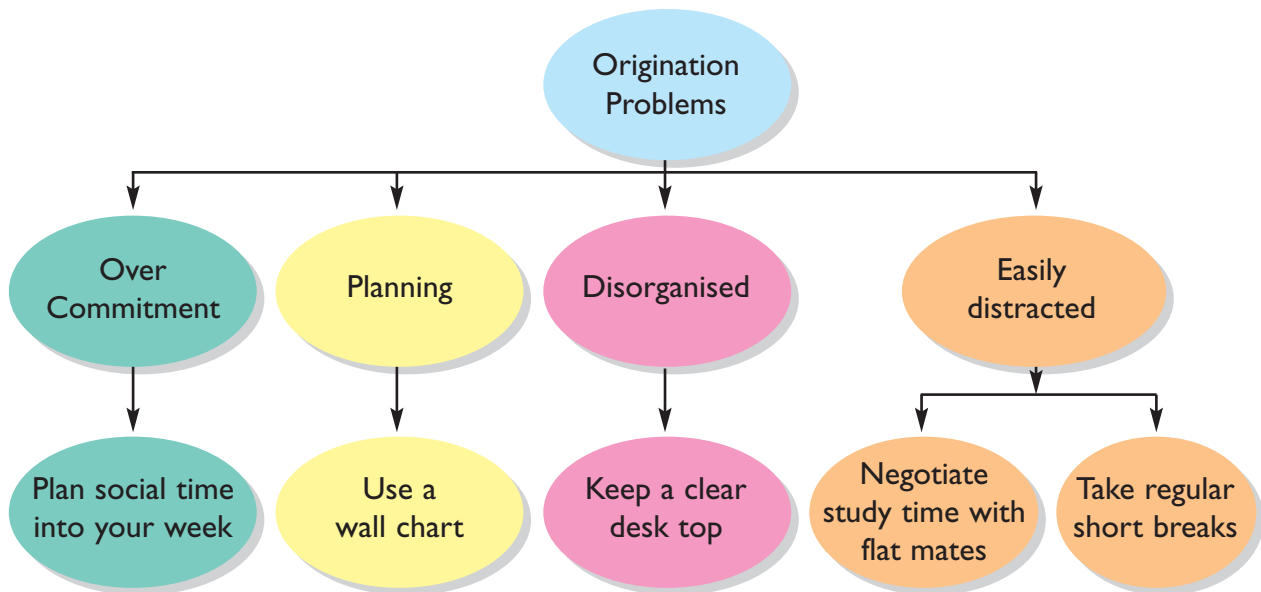
Thesaurus - provides synonyms for words with descriptions and sample sentences to aid understanding.

Word Wizard - is a step-by-step process linking the word you know, to the word you are searching for.

Inspirations is a software tool that will help you to develop and organise your ideas. The programme allows you to create both a visual map and linear outline of your ideas as well as providing templates for essay planning, report writing and organisation of presentations.

The programme is easy to use and you can make use of colour and symbol representation to visually display and organise your ideas.

Diagram



Linear

Organisation problems

I. over commitment

A. plan social time into your week

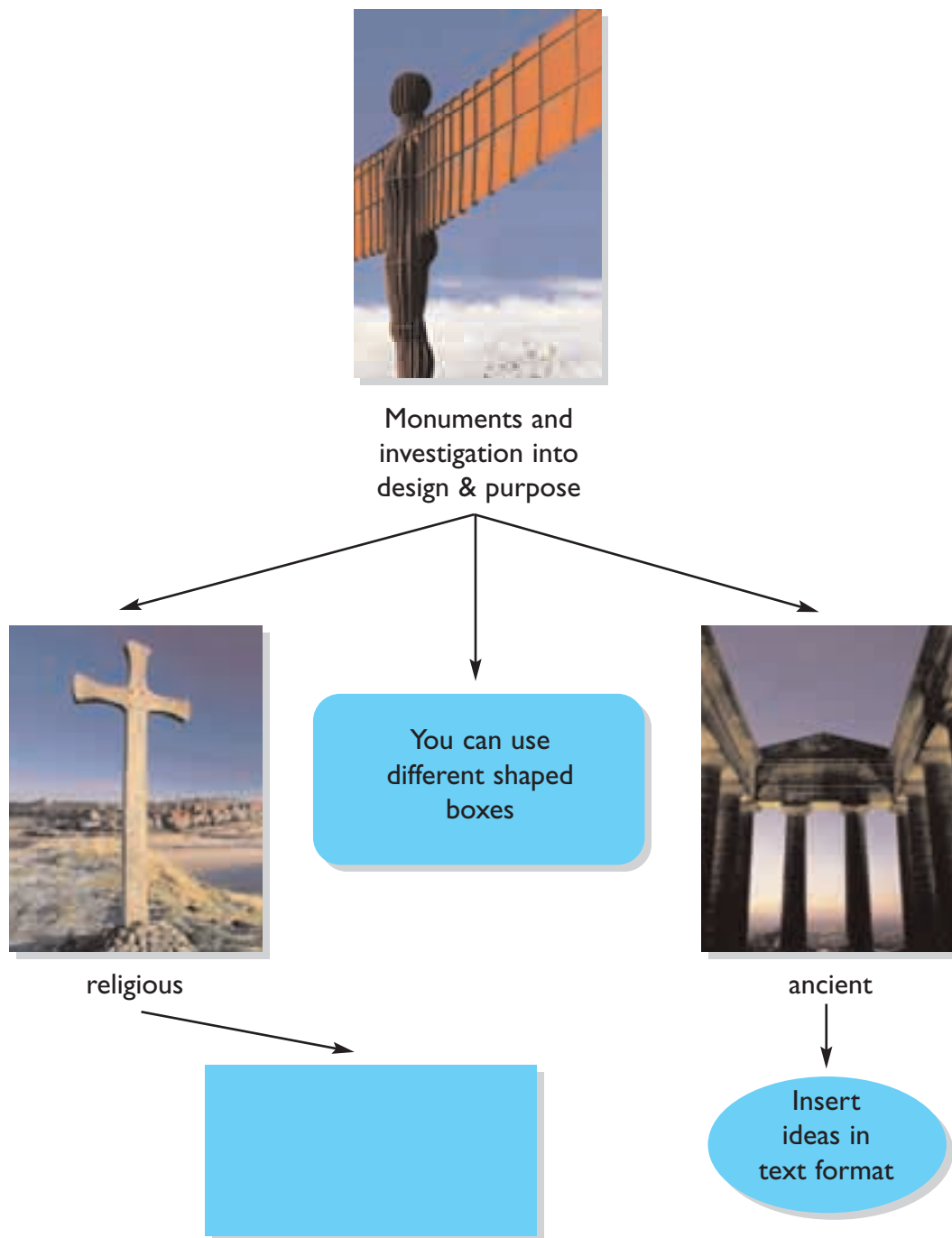
II. planning

A. use a wall chart

III. disorganised

A. negotiate study time with flat mates

B. take regular short breaks



How to access textHELP and Inspiration

Click on the Start menu and look for the Accessibility icon (a blue disability symbol in a white box). Right click on the Accessibility icon to display the Read & Write and Inspiration menus. Double click on the selected programme to open.

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