A Guide to Report Writing

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1   INTRODUCTION

Effective written communication skills will be of great importance to you both at College and in your career. The purpose of this document is to help you to develop these skills by acting as a handy reference during the Academic Development module and the rest of your course.

Effective written communication depends on adapting your writing to the circumstances, to the nature of the message and, above all, to the requirements of the reader. For this reason, you will need to use many different forms of communication in your career. You may need to write business or technical reports, business letters, memos, instruction manuals and so on. This guide concentrates on only one of these, the technical or business report. However, the principles set out here apply to many other types of communication.

The important elements in effective report writing are the planning and general organisation of the report, the structure of the content, the style of writing, the presentation of numerical and graphical data and the use of references. Each of these will be covered in the pages that follow.

2   PREPARATION

2.1   Introduction

How do you set about writing your report? Before writing the report you must identify the purpose, plan the contents and research the material.

2.2   Purpose

Consider **who** the report is being written for. A college assignment for the module tutor will be read from cover to cover and will assess your understanding of the subject. However, in industry it is likely that some people won't have time to read the full report so will only read the summary and conclusions. Therefore you need to assess who the report is written for and what they are going to do with it.

Another key point to consider is **why** you are writing the report. A report should always have a clear objective. Before you start writing ask yourself:

- why do they want it;
- what is the purpose;
- what do they want it to cover;
- what do they not want it to cover?

2.3   Planning

Writing reports involves gathering facts. It is essential to start off by brainstorming what you have been asked to do. A simple method of doing this is to write down, in the centre of a plain piece of paper, the most important word or short phrase, then write down any ideas that link to the purpose of the report. (**See *Mind Mapping Study Guide* on Moodle**) .

2.4   Research

(a) Preparing to do your research Before looking up references, sketch out the main things that you are looking for. This helps to make the research more purposeful, and can save you going off at a tangent or getting distracted. You will, of course, find out things which change your original outline.

(**b) Doing the research** Take notes from as many different sources as you practically can – books, journals, magazines, internet documents, etc.

> **Useful Tips**
>
> (1) Write your notes on a separate piece of paper or card index card for each reference. This allows you to sort them out into a logical order later on to match the structure of the report.
>
> (2) For each reference, write down full details of author, title, chapter, date, etc. This can save lots of time when you come to write your reference list, as you won't have to go back to the original documents. (***Section 7***)

3   CONTENTS OF A REPORT

3.1   Introduction

Technical and business reports are normally divided into a series of sections which have distinct and well recognised functions. These sections, in order of presentation, are the **summary, introduction, main body of the work, the discussion (or interpretation) and the conclusion.** They may be followed by a list of references and appendices. The functions of each of these sections are described below.

3.2   Title page

The title page highlights the central theme of the report and includes the title, author's name, date and, if necessary, the name of the person or organisation who commissioned the report.

3.3   Contents Page

The contents page is a list of all your chapters, sections, headings, sub headings, appendices and illustrations. All but the shortest of reports should have a contents page.

3.4   Summary

The purpose of the summary is to give a very brief outline of the rest of the report for people who do not want to read the whole of it, or who want to know what is in the report before reading it. The acid test is whether the content of the report is clear to someone who reads only the summary. The summary should, therefore, contain such information (from the introduction, main text, discussion and conclusion) that is needed to comprehend the contents fully. The summary should be:

>   (a) written after the rest of the report;
>   (b) presented at the start of the report;
>   (c) factual, concise, and in an appropriate style.
>   **(see *Section 5* in this guide)**

The summary should <u>not</u> be a re-statement of the conclusion

3.5   Introduction

The purpose of the introduction is to tell the reader what the aim of the work is and how you are going to tackle it (**see also *Section 4.3***). In other words, you must tell the reader:

>   (a) **what** you are going to write about,
>   (b) **why** you are going to write about it,
>   (c) **how** you are going to deal with it.

The introduction should, therefore, include a brief general background to the topic or task, a statement of the purpose of the work and an indication of the structure of the rest of the report. It may also include a statement to indicate related areas that you are not going to deal with ("a consideration of x and y is outside the scope of this work"). The introduction should be:

- (a) brief (for a typical course assignment, ½ - 1 side),
- (b) clear and concise,
- (c) stimulating.

3.6 Main Body of the Text   (but don't put this as a heading!)

The main body of the text should be arranged under **a series of headings** according to the purpose of the work. For example, if the work is a **scientific investigation**, or a survey of some sort, the headings may be:

- Materials and Methods
- Results
- Discussion **(See *Useful Tip* below)**

A similar structure can be adopted for a whole range of **task-based reports.** For example, if you had to report to the farm manager on the reorganisation of the farm office, you might use headings such as:

- Methods Used In The Investigation
- Findings
- Alternative Courses of Action

On the other hand, you may simply be required to **review a topic** – say the sheep industry in the UK. In this case the text may be divided by headings such as:

- Organisation of The Sheep Industry
- Breeds
- Production Systems
- Marketing

There is, of course, a whole range of other ways of organising the material, but however you do it, the importance of a clear logical system cannot be overemphasised. This is discussed further in *Section 5*.

Useful Tips: Discussion   (Have as a heading if separate section)

The discussion is probably the most difficult section of a scientific report to write, but it is very important. In the discussion you should attempt to **evaluate** (comment critically) on the information presented in the main text. If, for example, you have come across any inconsistencies in the information presented, You should weigh up the evidence for each argument within the discussion. If you have carried out your own research it is here you should compare your results with those of other published authors and, if the results differ, offer explanations for the differences. The good news is that once you have reached the end of the discussion, you should know exactly what your conclusions are!

3.7   Conclusion

The purpose of the conclusion is to draw out the message from the work and to suggest what the consequences of that message are. It must be distinguished from the summary (which encapsulates the whole report) but should be included in it. In other words, the conclusion should say:

> (a) what the body of the work tells us;
> (b) what should be done about it (action, further research, etc.).

<div style="border:1px solid black; padding:10px;">

Thus, your conclusion on the reorganisation of the farm office might say, for example, that:

"action x is the best alternative"

and

"this should be implemented in the next two months"

</div>

Don't be worried if your conclusion is short - provided you have discussed / interpreted the topic fully, a short conclusion helps the reader to understand.

3.8   References

References should be listed after the conclusion, but before the appendices. Correct presentation of references is important and is described in *Section 7*.

3.9   Appendices

Appendices are used to present material which is not necessary to an understanding of the report, but which may be helpful to the reader. By removing such inessential material (for example, extensive sets of data or supplementary information) from the body of the work, the communication is made simpler, shorter and clearer.

3.10   Word / page limits

Many assignment briefs have a word / page **limit** stated; if it is a **word limit,** you will need to include **an accurate word count** in your completed work . By convention, words counted go from **the start of the summary to the end of the conclusion** and **include ALL WORDS (both normal sentences as well as any words associated with tables and figures).**

Please be aware that word / page **limits** are rigidly enforced so that any words / pages written after the limit has been reached will not be marked (or other penalties enforced as in the individual major project).

Included in the word count:
Summary, introduction, literature review, methodology, results, discussion/evaluation, conclusion/recommendations.

Not included in the word count:
Title page, contents page, lists of figures/tables, acknowledgements, references, bibliography, appendices.

3.11 Word / page guide

Occasionally, an assessment task may contain a word or page **guide**. This is intended to help you judge the number of words / pages you may need to complete the task. There is no specific penalty for work that falls short of or exceeds a word / page **guide**.

4   STRUCTURE AND CLARITY

4.1   Introduction

Your aim in technical or business reports should be to make your meaning clear to the reader. In order to do this you must ensure that your writing has a logical structure and that this structure is displayed to the reader by a whole series of signposts. These aspects are explained in this section.

4.2   Structure: Unity and Sequence

A logical structure requires two things: unity and sequence. The concept of unity is not an easy one to explain.

To achieve <u>unity</u>, it is necessary to separate the various discrete elements of what you want to say into self-contained packages. One way of doing this is to create a mind map that identifies key areas and their relationships while helping you to plan the project. Start by writing the central theme in the middle of the paper, and working outwards. Figure 1 illustrates a way in which an assignment based on the Euro could be planned to achieve unity in this way:
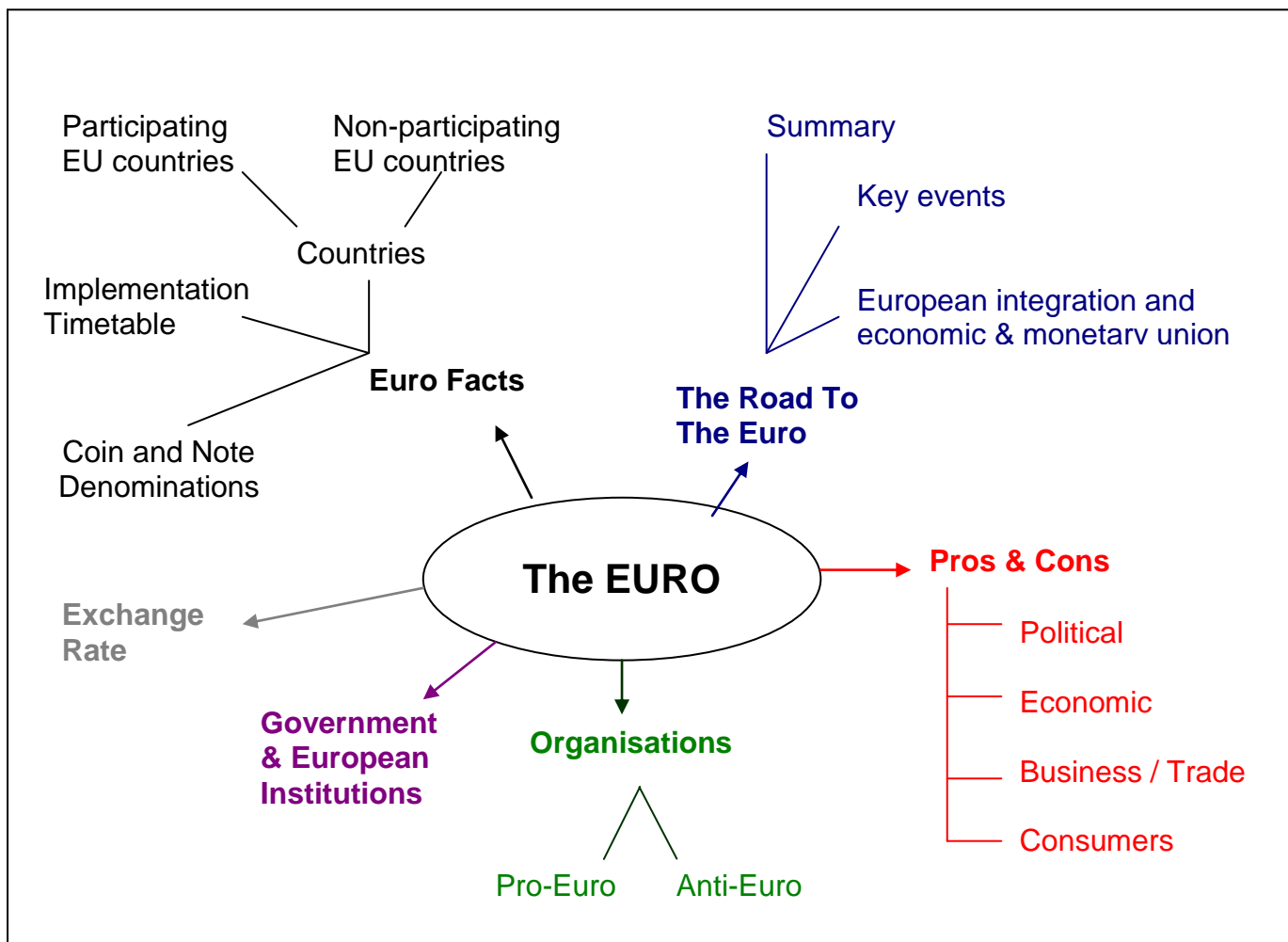
Figure 1 – Use of patterned notes

Once you have identified the various topics in this way they can be organised into paragraphs, and paragraphs on related subjects can be organised into sections. It is then necessary to decide on a logical sequence for these sections and paragraphs. The sequence depends on the subject matter and the approach. For example it may be:

- in chronological order (e.g. description of the breeding cycle of sheep or a new product development process);

- in descending order of importance (e.g. factors affecting the yield of wheat or factors affecting food purchase);

- in ascending order of importance leading to a conclusion (e.g. argument of a case).

However, you should aim to present your ideas in an ordered sequence so that a reader will follow the line of reasoning without difficulty. Determining the best sequence is not always an easy task, especially when dealing with complex subjects.

If in doubt discuss your plan with your personal or module tutor - they will be happy to help you think it out.

4.3 Clarity: the use of signposts

To make your writing easy to read it is important to provide frequent signposts that tell the reader where s/he is and where s/he is going. Some of the signposts you can use are listed below.

(a)   **Title** Each piece of work should have a clear descriptive title that gives a guide to the content of the work. You should avoid "journalistic" titles that tell you little. Thus, "The Prevention and Control of Mastitis in the Dairy Herd" is preferable to "Getting to Grips with Mastitis"!

(b)   **Contents Page** All but the shortest of reports should have a contents page.

(c)   **Introduction** The introduction should tell the reader what you are going to deal with and how. In longer reports you may use an introduction in each section.

(d)   **Headings**   Headings and sub-headings should be used freely in technical and business writing. You may have been told not to use heading in English essays, but this does not hold in technical and business reports where headings are very helpful in making your meaning clear. For this reason it is important that the heading system reflects the structure of the report. You should, therefore, adopt a system of headings and sub-headings that show the relationships of the various sections.

Here, for example, is a diagram that shows the structure of a chapter in Burns and Bush (2000).
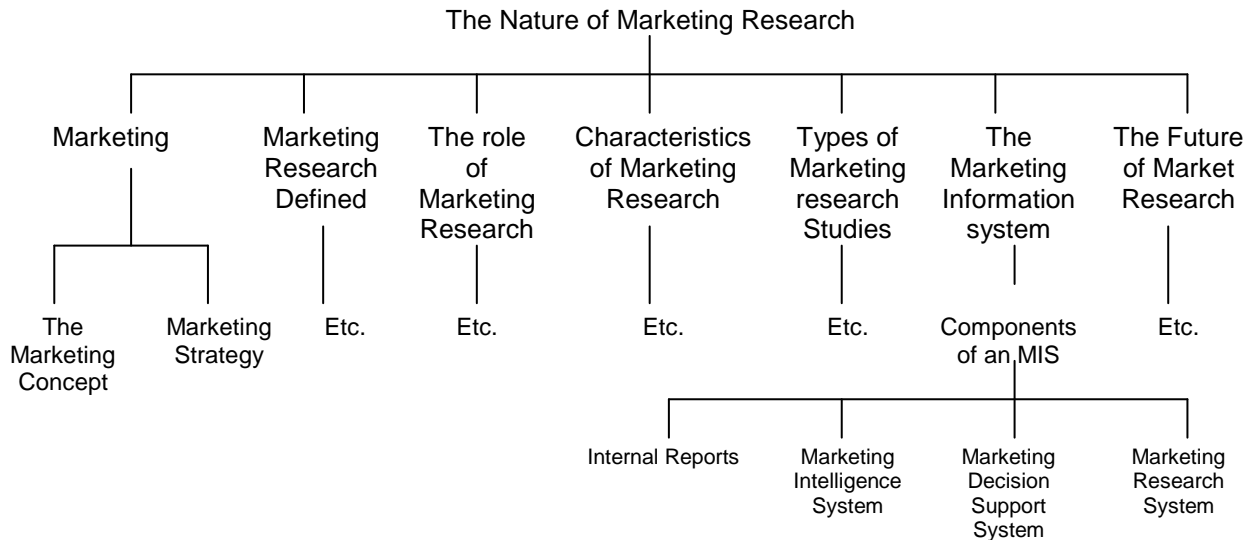
The heading system used in this case must be such that the reader knows, for example, that the section marked 'Internal Reports' is part of the section on 'Components of an MIS', which is part of the section on 'The Marketing Information System'. To achieve this all headings at the same level of sub-division must be the same. We might therefore have a series of headings as follows:

THE NATURE OF MARKETING RESEARCH	**(Bold capitals)**
The Marketing Information system	**(Bold lower case)**
Components of an MIS	**(Indented bold lower case)**
Internal Reports are defined……..	(**Indented bold lower case** on same line as text)

(e)   **Notation**   If it is necessary to cross reference to other sections of the report then a method of easily identifying the sections may be desirable. The most straightforward and generally used method of notation is decimal numbering. It clearly shows the hierarchy of your thoughts.

1.	**THE NATURE OF MARKETING RESEARCH**
1. 6	**The Marketing Information system**
1.6.1	**Components of an MIS**
1.6.1.2	**Internal Reports** are defined…….……...

(f) **Topic Sentences** When you are reading you may find topic sentences a helpful device. These are sentences often found at the beginning of a paragraph, which are used as a summary of what is to follow. That is, they are used to make a general statement about the topic which is then developed further in the rest of the paragraph.

Useful Tips

There is a range of different systems of headings and notation you can use. But remember whichever you use, always be consistent throughout the report.

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5 STYLE

5.1 Introduction

Do not be frightened by the use of the word "style". Style simply means the way you use words and sentences in your writing. The style of effective reports is direct, simple and straightforward. This is easy to say but more difficult to achieve: as George Bernard Shaw once wrote: "I am sorry to have written such a long letter but I did not have time to write a short one." Some rules to help you follow.

5.2 Words and Sentences

George Orwell wrote some helpful rules for scientists who write. He said:

a) "never use two words when one word will do,
b) never use a big word when a small one will do,
c) never use a long sentence when a short one will do".

Some examples of word savings are shown in Table 1

Table 1   Superfluous words and alternatives

Superfluous words	Better English
on account of the fact that	as
in order to	to
at the present time	now
on the occasion of	when
with the result that	so that
in the college environment	in college
it is apparent therefore	thus
forward planning	planning

5.3 Tense

Reports are normally written in the **past** tense and **impersonally**.

> e.g. It is recommended that **NOT** I recommend that

Never write "you".....

5.4 Use of Tables and Diagrams

Never use words when you can put your message in numbers (use a table). Never use numbers when you can use a picture (a diagram or graph): pictures are clearer than numbers; numbers are clearer than prose and both save words. But always remember tables and diagrams do need some words of explanation. (*Section 6*)

5.5 Presentation

Be aware that poorly laid out work, which is badly sequenced with poor word processing or handwriting, frequent spelling mistakes and incorrect grammar **will lose you marks**.

5.6 How to improve your style

Remember anyone can improve their writing skills through hard work, constructive feedback and practice. Below are some key tips for improving your style.

a) **Work with a rough draft**. Complete a rough draft and leave for a few days then re-read it or ask a friend to read it and make comments. This gives you time to reflect on your report.

b) **Avoid jargon**. Never use jargon unless a) it saves words and b) your readers will understand it.

c) **Keep it clear and straightforward**. A good style is one which is clear and concise so the reader can easily follow it.

Useful Tips

Always check your work. Before you hand in any work, be it an assignment or an exam script, check it for errors in accuracy such as spelling and punctuation, readability and flow and clarity of structure

Avoid plagiarism. You know the penalties (**see the plagiarism section in the Academic Development module on Moodle)**

A CHALLENGE: **when you have written your draft copy go through it and see if you can remove 25% of the words without changing the meaning.**

6 DATA PRESENTATION

6.1 Introduction

We have already mentioned the value of tables and diagrams in saving words. They also help to make your message clear. However, they will only do this if the data is accurate and properly presented in the text. Some simple guidelines on this follow.

6.2 Tables or Figures?

> **"A picture is worth a thousand words"**

All material in your report that is not prose is called either a figure or a table (although photographs are known as plates). Figures include diagrams, graphs and charts. Figures are to be preferred to tables and prose, especially when complex relationships are involved. Tables are necessary when it is important to know exactly what the numbers are.

Figures There are many different ways of presenting information as figures. Which one you choose depends on the purpose of the figures, and the nature of the data. Again, there are a number of important rules in presenting data in figures. Some ideas can be found in Figure 2.

Tables There are different types of tables for different purposes. Usually tables in reports are intended to demonstrate or support a particular point being made in the text. They therefore need to be designed to fulfil this purpose. A few guidelines on the presentation of demonstration tables are given in Table X in Figure 3.

6.3 The Use of Tables and Figures in Reports

Numbering In technical reports tables and figures (Table 1–n and Figure 1-n) should be numbered in sequence to allow you to refer to them in the text.

Captions All tables and figures must have full, clear and explicit captions telling the reader exactly what the numbers and units are. The golden rule is that the message of any table or figure must be clear in isolation from the text.

Captions go above a table but below a figure.

Reference in the text You must **always** refer to the table or figure in the text **before** you come to it. Do not repeat details of the table or figure, but summarise what it shows e.g. "Grain yield response to successive increments of applied nitrogen shows the law of diminishing returns (Figure 1 Table X)".

Source You must always give the source of the data depicted.

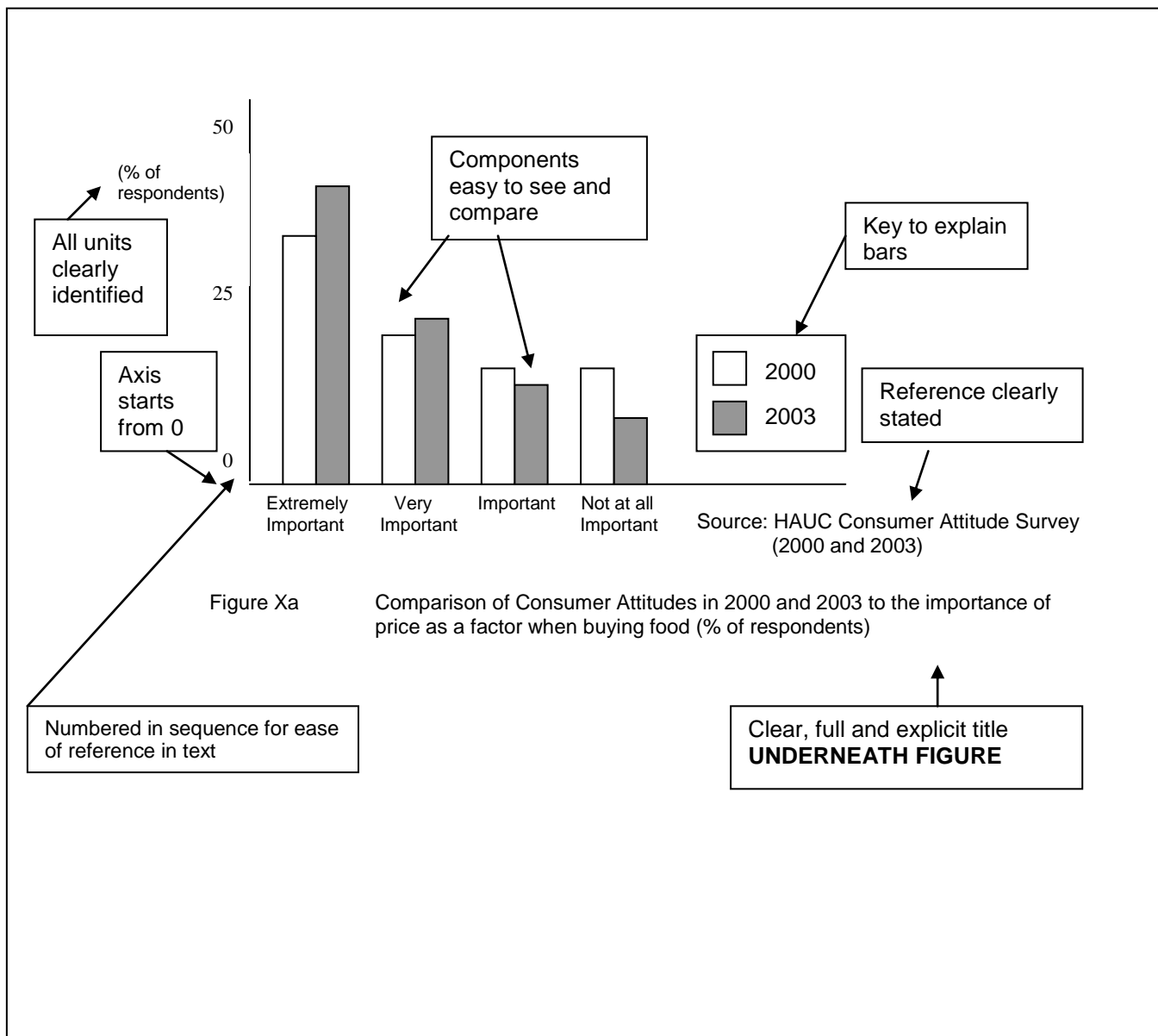**Listing** List tables and figures after the contents page.

Figure Xa   Comparison of Consumer Attitudes in 2000 and 2003 to the importance of price as a factor when buying food (% of respondents)

Figure 2   Presentation of Figures (Example Data Only)

The diagram contains the following elements:

"Grain yield response to successive increments of applied nitrogen follows the law if diminishing returns (Table X)" Reference in text **before** table showing what the table shows

Clear, full and explicit title **AT THE TOP**

Numbered in sequence for ease of reference in text

All units clearly identified

Units given as high in the table as possible to avoid repetition. If all units are the same they should be included in the title.

Numbers to be compared presented in columns, not rows

Columns arranged in some natural order of size

Reference clearly stated

Table X *Grain yield response of wheat to successive increments of applied nitrogen*

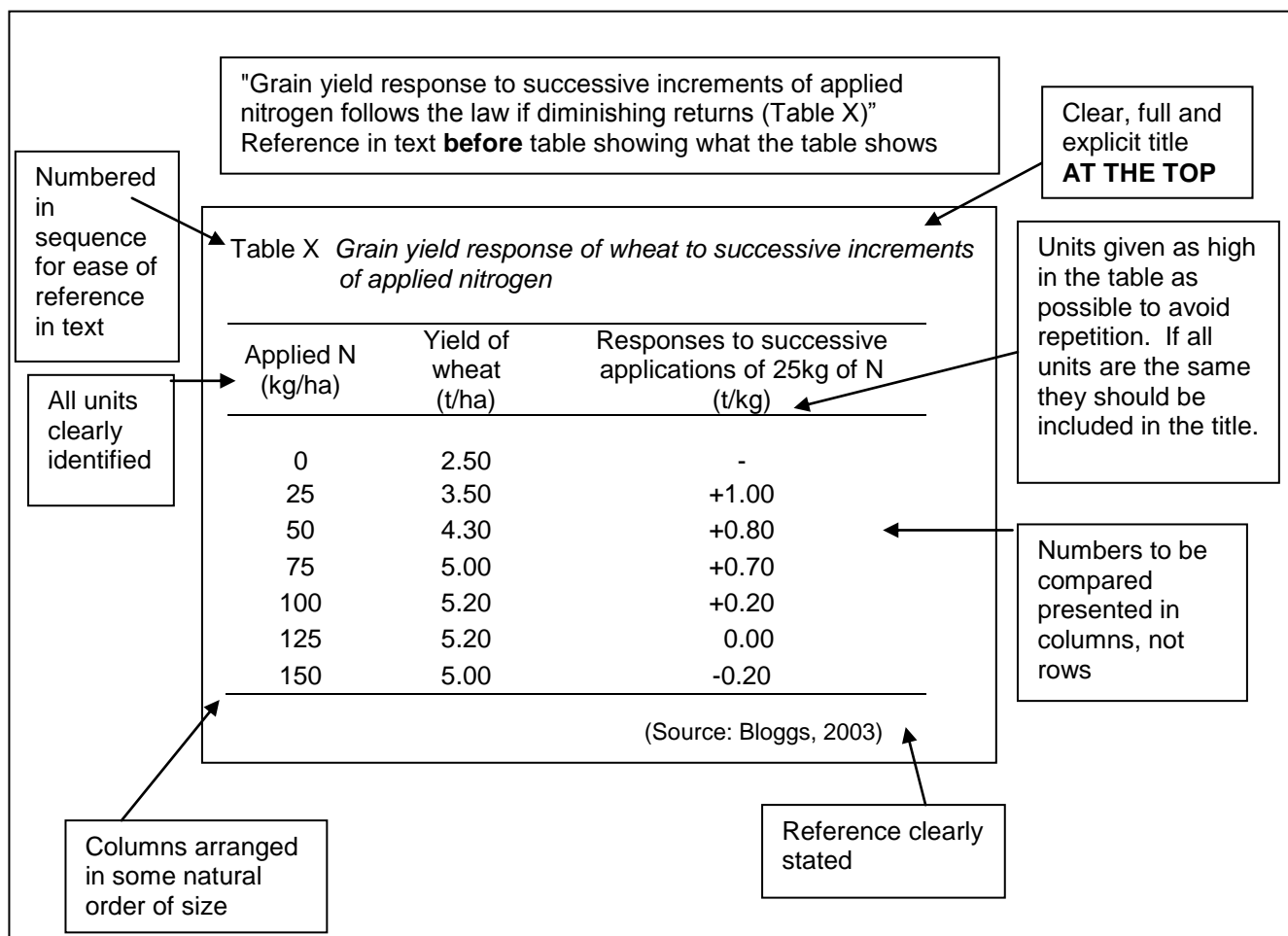| Applied N (kg/ha)	Yield of wheat (t/ha)	Responses to successive applications of 25kg of N (t/kg)
0	2.50	-
25	3.50	+1.00
50	4.30	+0.80
75	5.00	+0.70
100	5.20	+0.20
125	5.20	0.00
150	5.00	-0.20

(Source: Bloggs, 2003)

Figure 3   Presentation of Tables

NB   If you are presenting data in a table **that you have created yourself**, show this by putting   (Source: Author's own) under the table.

7 USE OF REFERENCES

7.1 Introduction

Technical writing sometimes includes a bibliography but always includes a list of references. They have different purposes. A **bibliography** is a systematic list of sources of information on a particular subject which have been consulted although specific facts from them have **not** been cited in the text. **References** are the sources of information which **have** been cited in the text as evidence for statements and assertions. This section provides an introduction to the purpose of using references and the rules which govern their use.

7.2 Why Use References?

In higher education and research, unsupported assertions are not acceptable. In other words, you cannot simply say that something is so without providing supporting evidence. Evidence can be obtained or it can be provided by reference to writings of someone who **has** published such research or who is an acknowledged authority on the subject. Naturally, this does not apply when your assertion is something that is widely understood. It does, however, apply to anything that is new, little known or open to argument.

If I said that Shropshire sheep have four legs I would not need to provide evidence. If I said that they have five legs there may be some who would doubt my word. In such a case I would need to provide evidence, either by doing research (counting the number of legs of randomised samples of the Shropshire sheep population), or by reference to the writing of an authority on this subject who had done such work.

7.3 Citing References in the Text

In order to draw the reader's attention to the supporting evidence you simply write the surname of the author and the date of publication of the paper or book in the text. This can be done in more than one way, thus:

"It has recently been shown that Shropshire sheep have five legs (Parry, 2011)."

or   "Parry (2011) recently demonstrated that Shropshire sheep have five legs."

The reader now knows that you have an authority for your statement.

7.4   Listing of References

Your reader may wish to examine the evidence you have provided so s/he must be given enough information to find it in a library. This is done by listing **all** the references you have cited in the text at the end of the work.

The presentation of a list of references is done in a standardised way so that there is no confusion. You must use the Harvard Referencing adopted by Harper Adams University College in your own work. Note in particular the following.

References are listed in alphabetical and then, in the case of two by the same author, in chronological order.

There are many variations on this presentation (for leaflets, textbooks, company reports, etc.) Full details can be obtained from Harper Adams University College Referencing Guide both on Moodle and in the library).

Useful Tips: Remember these Golden Rules when referencing

- References must be cited to support statements on things that are new, little known or controversial

- All references in the text should be listed at the end of the work.

- Only references cited in the text should be listed.

REFERENCES

Harper Adams University College. 2011. *Guide to citing references*. Newport: Harper Adams University College