A Practical Guide to Academic Writing for International Students
TABLE OF CONTENTS

1. Introduction
2. Basics of writing
3. Organising paragraphs
4. Introductions and conclusions
5. Academic scientific style
6. Case studies
7. Writing longer papers
8. Reports and executive summaries
9. Issues in thesis and dissertation writing in English as a second language
READ THE LATEST ON ACADEMIC WRITING FOR INTERNATIONAL STUDENTS WITH THESE KEY TITLES

VISIT WWW.ROUTLEDGE.COM TO BROWSE FULL RANGE OF ACADEMIC WRITING TITLES
Introduction

Writing essays and dissertations can be a significant challenge for many international students studying at English-language universities. To help instructors support their students in this demanding task, we have put together some key chapters from leading titles in the field of Academic Writing for non-native English speakers.

The first three chapters, by Stephen Bailey, give a brief overview of the basics of Academic Writing and explain to international students how to create well-structured paragraphs and write effective introductions and clear conclusions.

The next chapter, by Jane Bottomley, explores the main features of academic scientific style and the notion of good academic practice in relation to the use of sources. It also presents some strategies for paraphrasing and summarizing which will help students to use academic sources in a positive way.

Chapters five, six and seven, again written by Stephen Bailey, provide international Business and Economics students some handy tips that will help them to succeed in writing their case studies, essays, reports and executive summaries.

The final chapter by Brian Paltridge and Sue Starfield, discusses four clusters of issues which can directly impact on second language speakers writing a thesis or dissertation in English and provide some useful tips to overcome them.

We hope you enjoy reading through these selected chapters, be sure to click through and learn more about each title. Each chapter is just a small sample of our content, visit our website to find out more about the books these are excerpted from and to browse our full selection of books in this area.

Note to the readers

References from the original chapters have not been included in this text. For a fully-referenced version of each chapter, including footnotes, bibliographies, references and endnotes, please see the published title. Links to purchase each specific title can be found on the first page of each chapter. As you read through this Freebook, you will notice that some excerpts reference previous chapters, please note that these are references to the original text and not the Freebook.
This chapter is excerpted from

*Academic Writing: A Handbook for International Students*

by Stephen Bailey.

© 2018 Taylor & Francis Group. All rights reserved.

Learn more
Most academic courses test students through written assignments. These tasks include coursework, which may take weeks to write, and exam answers, which often have to be written in an hour. This unit deals with:

- The names of different writing tasks
- The format of long and short writing tasks
- The structure of sentences and paragraphs

1 The purpose of academic writing

Students should be clear why they are writing. The most common reasons include:

- to report on a piece of research the writer has conducted
- to answer a question the writer has been given or chosen
- to discuss a subject of common interest and give the writer’s view
- to synthesise research done by others on a topic

■ **Can you suggest any other reasons?**

2 Features of academic writing

Although there is no fixed standard of academic writing, and style may vary from subject to subject, academic writing is clearly different from the written style of newspapers or novels.

For example, it is generally agreed that academic writing attempts to be accurate, so that instead of ‘the metal was very hot’ it is better to write ‘the metal was heated to 65°C’. What are some of the features of academic writing?

■ **Working alone or in a group, list your ideas here.**
3 Common types of academic writing

The main types of written work produced by students are presented in the following table.

- **Match the terms on the left to the definitions on the right.**

<table>
<thead>
<tr>
<th>Notes</th>
<th>A piece of research, either individual or group work, with the topic chosen by the student(s).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report</td>
<td>The longest piece of writing normally done by a student (20,000+ words) often for a higher degree, on a topic chosen by the student</td>
</tr>
<tr>
<td>Project</td>
<td>A written record of the main points of a text or lecture, for a student's personal use.</td>
</tr>
<tr>
<td>Essay</td>
<td>A general term for any academic essay, report, presentation or article</td>
</tr>
<tr>
<td>Dissertation/Thesis</td>
<td>A description of something a student has done (e.g. conducting a survey or experiment).</td>
</tr>
<tr>
<td>Paper</td>
<td>The most common type of written work, with the title given by the teacher, normally 1,000–5,000 words.</td>
</tr>
</tbody>
</table>

4 The format of short and long writing tasks

Short essays (including exam answers) generally have this pattern:

- Introduction
- Main body
- Conclusion

Longer essays and reports may include:

- Introduction
- Main body
- Literature review
- Case study
- Discussion
- Conclusion
BASIC OF WRITING

- References
- Appendices

Dissertations and journal articles may have:

- Abstract
- List of contents
- List of tables
- Introduction
- Main body
- Literature review
- Case study
- Findings
- Discussion
- Conclusion
- Acknowledgments
- Notes
- References
- Appendices

In addition to these sections, books may also include:

- Foreword
- Preface
- Bibliography/Further reading

- Discuss the meanings of the preceding terms.
- Match the following definitions to terms in the preceding lists:

  a) A short summary which explains the paper's purpose and main findings.
  b) A list of all the sources the writer has mentioned in the text.
  c) A section, after the conclusion, where additional information is included.
  d) A short section where people who have helped the writer are thanked.
  e) Part of the main body in which the views of other writers on the topic are discussed.
  f) A section where one particular example is described in detail.
BASIC OF WRITING

Excerpted from Academic Writing: A Handbook for International Students

g) A preliminary part of a book usually written by someone other than the author.

<table>
<thead>
<tr>
<th>ACADEMIC JOURNALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>There are thousands of academic journals published in English and other languages around the world. The purpose of these journals is to provide a forum for academics within a specific discipline (e.g. education or civil engineering) to share cutting-edge research. Most journals publish several issues a year and are often available either online or in a hard copy.</td>
</tr>
<tr>
<td>One important feature of journals is that the articles they publish are generally peer-reviewed. This means that when an article is submitted the editors ask other specialists in that field to read the article and decide if it is worth publishing. Reviewers may make comments that lead to the article being modified.</td>
</tr>
<tr>
<td>Students need to get to know the leading journals in their subject, which are generally available via the university library.</td>
</tr>
</tbody>
</table>

5 The components of academic writing

There are no fixed rules for the layout of written academic work. Different schools and departments require students to follow different formats in their writing. Your teachers may give you guidelines, or you can ask them what they want, but some general patterns apply to most formats for academic writing.

Read the following text and identify the features underlined, using the words in the box.

| sentence | heading | subtitle | paragraph | title | phrase |

a) A Fishy Story
b) Misleading health claims regarding omega-3 fatty acids
c) Introduction
d) There has been considerable discussion recently about the benefits of omega-3 fatty acids in the diet.
e) It is claimed that these reduce the risk of cardiovascular disease and may even combat obesity. Consequently food producers have added omega-3s to products ranging from margarine to soft drinks in an attempt to make their products appear healthier and hence increase sales.
f) However, consumers may be unaware that there are two types of omega-3. The best (long-chain fatty acids) are derived from fish, but others (short-chain fatty acids) come from cheaper sources such as soya. This latter group have not been shown to produce the health benefits linked to the long-chain variety. According to Tamura et al. (2009) positive results may only be obtained either by eating oily fish three times a week, or by taking daily supplements containing 500mg of eicosapentaenoic acid (EPA) or docosahexaenoic acid (DHA).

(Source: Health Concerns, March 2016, p. 17)

6 Some other common text components

a) Reference to sources using citation: According to Tamura et al. (2009)

b) The use of abbreviations for convenience: docosahexaenoic acid (DHA)

c) Italicics: used to show words from other languages or add emphasis: Medical research companies know ex ante that these citizens cannot afford medicines. (= Latin for ‘before the event’)

d) Brackets: used to give extra information or to clarify a point: . . . but others (short-chain fatty acids) come from cheaper sources such as soya.

7 Simple and longer sentences

- Study the following table.

<table>
<thead>
<tr>
<th>Year</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>135,470</td>
<td>156,935</td>
<td>164,820</td>
<td>159,550</td>
<td>123,075</td>
</tr>
</tbody>
</table>

All sentences contain verbs:

In 2013 the company produced over 135,000 vehicles.

Between 2013 and 2014 vehicle production increased by 20%.

Simple sentences (such as the examples just given) are easier to write and read,
BASIC OF WRITING

but longer sentences are also needed in academic writing. However, students should make clarity a priority and avoid writing very lengthy sentences with several clauses until they feel confident in their ability. Sentences containing two or more clauses use **conjunctions, relative pronouns** or **punctuation** to link the clauses:

- *In 2013 Dragon Motors produced over 135,000 vehicles, but the following year production increased by 20%. (conjunction)*
- *In 2015 the company built 164,820 vehicles, which was the peak of production. (relative pronoun)*
- *Nearly 160,000 vehicles were produced in 2016; by 2017 this had fallen to 123,000. (punctuation – semicolon)*

- **Write two simple and two longer sentences using data from the following table**

  *Borchester College: gender balance by faculty, 2016 (percentages)*

<table>
<thead>
<tr>
<th></th>
<th>Law</th>
<th>Education</th>
<th>Engineering</th>
<th>Business</th>
<th>Computer sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>43</td>
<td>22</td>
<td>81</td>
<td>41</td>
<td>65</td>
</tr>
<tr>
<td>Female</td>
<td>57</td>
<td>78</td>
<td>19</td>
<td>59</td>
<td>35</td>
</tr>
</tbody>
</table>

8 Writing in paragraphs

- **Discuss the following questions:**
  
  What is a paragraph?
  
  Why are texts divided into paragraphs?
  
  How long are paragraphs?
  
  Do paragraphs have a standard structure?

- **Read the following text and divide it into a suitable number of paragraphs.**
BIOCHAR

Charcoal is produced by burning wood slowly in a low-oxygen environment. This material, which is mainly carbon, was used for many years to heat iron ore to extract the metal. But when in 1709 Abraham Darby discovered a smelting process using coke (produced from coal) demand for charcoal collapsed. At approximately the same time the carbon dioxide level in the atmosphere began to rise. But a new use for charcoal, renamed biochar, has recently emerged. It is claimed that using biochar made from various types of plants can both improve soil quality and combat global warming. Various experiments in the United States have shown that adding burnt crop wastes to soil increases fertility and cuts the loss of vital nutrients such as nitrates. The other benefit of biochar is its ability to lock CO2 into the soil. The process of decay normally allows the carbon dioxide in plants to return to the atmosphere rapidly, but when transformed into charcoal this may be delayed for hundreds of years. In addition, soil containing biochar appears to release less methane, a gas which contributes significantly to global warming. American researchers claim that widespread use of biochar could reduce global CO2 emissions by over 10%. But other agricultural scientists are concerned about the environmental effects of growing crops especially for burning, and about the displacement of food crops that might be caused. However, the potential twin benefits of greater farm yields and reduced greenhouse gases mean that further research in this area is urgently needed.


9 Practice

- Write two simple and two longer sentences on biochar.
  a) 
  b) 
  c) 
  d)
CHAPTER

2

ORGANISING PARAGRAPHS

This chapter is excerpted from Academic Writing: A Handbook for International Students by Stephen Bailey. © 2018 Taylor & Francis Group. All rights reserved.

Learn more
Paragraphs are the basic building blocks of academic writing. Well-structured paragraphs help the reader understand the topic more easily by dividing up the argument into convenient sections. This unit looks at:

- the components of paragraphs
- the way the components are linked together
- the linkage between paragraphs in the overall text

1 Paragraph structure

☐ **Read the following paragraph and answer the questions.**

Spanish is one of the world’s leading languages. It is spoken by over 500 million people, mainly in Spain and Central and South America, as a first or second language.

This is a result of the growth of the Spanish colonies in Central and South America from the sixteenth century. Increasingly, Spanish is also widely used in North America, where Spanish language newspapers and radio stations are common. Spanish is a Romance language which evolved from Latin, but which also contains many words from Arabic, due to the historical Moorish presence in the Iberian peninsula.

a) What is the topic of this paragraph?

b) How are the sentences in the paragraph linked together?
The paragraph can be analysed thus:

| 1 Topic sentence | Spanish is one of the world’s leading languages. |
| 2 Supporting information | It is spoken by over 500 million people, mainly in Spain and Central and South America, as a first or second language. |
| 3 Reason | This is a result of the growth of the Spanish colonies in Central and South America from the sixteenth century. |
| 4 Extra information 1 | Increasingly, Spanish is also widely used in North America, where Spanish language newspapers and radio stations are common. |
| 5 Extra information 2 | Spanish is a Romance language which evolved from Latin, but which also contains many words from Arabic, due to the historical Moorish presence in the Iberian peninsula. |

This example shows that:

I. A paragraph is a group of sentences which deal with a single topic. Dividing up the text into paragraphs helps both writer and reader to follow the argument more clearly.

II. The length of paragraphs varies significantly according to text type, but should normally be no less than four or five sentences.

III. Usually (but not always) the first sentence introduces the topic. Other sentences may give definitions, examples, extra information, reasons, restatements and summaries.

IV. The parts of the paragraph are linked together by the reference words, conjunctions and adverbs shown in bold in the table. They guide the reader through the arguments presented.
ORGANISING PARAGRAPHS

2 Practice A

- **The sentences in the following paragraph on the topic of home ownership have been mixed up. Use the table to put them in the right order.**

I. The reasons for this variation appear to be more cultural and historical than economic, since high rates are found in both rich and poorer countries.

II. There appears to be no conclusive link between national prosperity and the number of home owners.

III. Both the US and Britain have similar rates of about 65%.

IV. The rate of home ownership varies widely across the developed world.

V. Germany, for instance, has one of the lowest rates, at 52%, while in Spain it is much higher, 78%.

<table>
<thead>
<tr>
<th>Topic sentence</th>
<th>Example 1</th>
<th>Example 2</th>
<th>Reason</th>
<th>Summary</th>
</tr>
</thead>
</table>

3 Practice B

- **Read the next paragraph from the same essay and answer the questions that follow**

Despite this, many countries encourage the growth of home ownership. Ireland and Spain, for instance, allow mortgage payers to offset payments against income tax. It is widely believed that owning your own home has social as well as economic benefits. Compared to renters, home owners are thought to be more stable members of the community who contribute more to local affairs. In addition, neighborhoods of owner occupiers are considered to have less crime and better schools. But above all, home ownership encourages saving and allows families to build wealth.
ORGANISING PARAGRAPHS

- **Analyse the paragraph using the table, giving the function of each sentence**

<table>
<thead>
<tr>
<th>Topic sentence</th>
<th>Despite this, many countries encourage the growth of home ownership</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Underline the words and phrases used to link the sentences together.**
- **Which phrase is used to link this paragraph to the one before?**

4 Introducing paragraphs and linking them together

The paragraph in Practice B begins with a phrase which links it to the previous paragraph in order to maintain continuity of argument:

> Despite this (i.e. the lack of a conclusive link)

In order to begin a new topic you may use phrases such as:

> Turning to the issue of child labour . . .
> Rates of infection must also be examined . . .
> Inflation is another area for consideration . . .

Paragraphs can also be introduced with adverbs:

> Traditionally, few examples were . . .
> Finally, the performance of . . .
> Currently, there is little evidence of . . .
> Originally, most families were . . .
5 Practice C

Use the following notes to write two paragraphs on the subject of ‘Trams’. Use conjunctions and other suitable phrases to introduce and link the paragraphs together.

- Trams (streetcars in the US) first developed in late 19th century
- Provided cheap and convenient mass transport in many cities
- Rail-based systems expensive to maintain
- Fixed tracks meant system was inflexible
- During 1950s and 1960s many European and Asian cities closed tram systems
- Today trams becoming popular again
- Some cities (e.g. Paris and Manchester) building new systems
- Trams less polluting than cars and cheaper to operate
- Problems remain with construction costs and traffic congestion blocking tracks
- Expense of building modern tramways means that they remain controversial

6 Practice D

Use the information in the following table and graph to write a paragraph on ‘UK rainfall in 2016’.

<table>
<thead>
<tr>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>159</td>
<td>145</td>
<td>94</td>
<td>121</td>
<td>90</td>
<td>143</td>
<td>110</td>
<td>97</td>
<td>98</td>
<td>44</td>
<td>95</td>
<td>71</td>
<td>105</td>
</tr>
</tbody>
</table>
ORGANISING PARAGRAPHS

Figure 1 UK rainfall anomalies 2016 (percent of average monthly rainfall 1960–1989)
Source: The Met Office
An effective introduction explains the purpose, scope and methodology of the paper to the reader. The conclusion should provide a clear answer to any questions asked in the title, as well as summarising the main points under discussion. With coursework, it may be better to write the introduction after writing the main body.

1 Introduction components

Introductions are usually no more than about 10% of the total length of an assignment. Therefore in a 2,000-word essay the introduction would be approximately 200 words.

What components are normally found in an essay introduction? Choose from the following list.

<table>
<thead>
<tr>
<th>Components</th>
<th>Y/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>i) A definition of any unfamiliar terms in the title</td>
<td></td>
</tr>
<tr>
<td>ii) Your personal opinions on the subject of the essay</td>
<td></td>
</tr>
<tr>
<td>iii) Mention of some sources you have read on the topic</td>
<td></td>
</tr>
<tr>
<td>iv) A provocative idea or question to interest the reader</td>
<td></td>
</tr>
<tr>
<td>v) A suitable quotation from a famous authority</td>
<td></td>
</tr>
<tr>
<td>vi) Your aim or purpose in writing</td>
<td></td>
</tr>
<tr>
<td>vii) The method you adopt to answer the question</td>
<td></td>
</tr>
<tr>
<td>viii) Some background or context of the topic</td>
<td></td>
</tr>
<tr>
<td>ix) Any limitations you set yourself</td>
<td></td>
</tr>
<tr>
<td>x) An outline of the main body</td>
<td></td>
</tr>
</tbody>
</table>
INTRODUCTIONS AND CONCLUSIONS

Read the following extracts from introductions to articles and decide which of the components listed above (i – x) they are examples of.

A) In the past 20 years the ability of trial juries to assess complex or lengthy cases has been widely debated.

B) The rest of the paper is organised as follows. The second section explains why corporate governance is important for economic prosperity. The third section presents the model specification and describes the data and variables used in our empirical analysis. The fourth section reports and discusses the empirical results. The fifth section concludes.

C) We attempted to test our hypothesis by comparing the reactions of a random sample of postgraduates with a group of first-year students.

D) There is no clear empirical evidence sustaining a ‘managerial myopia’ argument. Pugh et al. (1992) find evidence that supports such a theory, but Meulbrook et al. (1990), Mahoney et al. (1997), Garvey and Hanka (1999) and a study by the Office of the Chief Economist of the Securities and Exchange Commission (1985) find no evidence.

E) ‘Social cohesion’ is usually defined in reference to common aims and objectives, social order, social solidarity and the sense of place attachment.

F) This study will focus on mergers in the media business between 2000 and 2010, since with more recent examples an accurate assessment of the consequences cannot yet be made.

G) The purpose of this paper is to investigate changes in the incidence of extreme warm and cold temperatures over the globe since 1870.

2 Introduction structure

There is no standard pattern for an introduction, since much depends on the type of research you are conducting and the length of your work, but this is a common structure:

a) Definition of key terms, if needed
b) Relevant background information
c) Review of work by other writers on the topic
INTRODUCTIONS AND CONCLUSIONS

d) Purpose or aim of the paper
e) Your research methods
f) Any limitations you imposed
g) An outline of your paper

- **Study the introduction to an essay entitled 'Evaluate the experience of e-learning for students in higher education'.**

There are a range of definitions of this term, but in this paper 'e-learning’ refers to any type of learning situation where content is delivered via the internet. Learning is one of the most vital components of the contemporary knowledge-based economy. With the development of computing power and technology the internet has become an essential medium for knowledge transfer. Various researchers (Webb and Kirstin, 2003; Honig et al., 2006) have evaluated e-learning in a healthcare and business context, but little attention so far has been paid to the reactions of students in higher education (HE) to this method of teaching. The purpose of this study was to examine students’ experience of e-learning in an HE context.

A range of studies was first reviewed and then a survey of 200 students was conducted to assess their experience of e-learning. Clearly a study of this type is inevitably restricted by various constraints, notably the size of the student sample, which was limited to students of Pharmacy and Agriculture. The paper is structured as follows. The first section presents an analysis of the relevant research, focusing on the current limited knowledge regarding the student experience. The second part presents the methodology of the survey and an analysis of the findings, and the final section considers the implications of the results for the delivery of e-learning programmes.

- **Underline the following sections (a-g) of the introduction above:**
  
  a) Definition
  
  Certain words or phrases in the title may need clarifying because they are not widely understood or are used in a special sense.

  b) Context
It is useful to remind the reader of the wider context of your work. This may also show the value of the study you have carried out.

c) Reference to other researchers

While a longer article may have a separate literature review, in a shorter essay it is still important to show familiarity with researchers who have studied this topic previously. This may also reveal a gap in research which justifies your work.

d) Aim

The aim of your research must be clearly stated so the reader knows what you are trying to do.

e) Method

The method demonstrates the process that you undertook to achieve the given aim.

f) Limitations

You cannot deal with every aspect of this topic in an essay, so you must make clear the boundaries of your study.

g) Outline

Understanding the structure of your work will help the reader to follow your argument.

3 Opening sentences

It can be difficult to start writing an essay, but especially in exams, hesitation will waste valuable time. The first few sentences should be general but not vague in order to help the reader focus on the topic. They often have the following pattern:

<table>
<thead>
<tr>
<th>Time phrase</th>
<th>Topic</th>
<th>Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently,</td>
<td>the control of water resources</td>
<td>has emerged as a potential cause of international friction</td>
</tr>
<tr>
<td>Since 2008</td>
<td>electric vehicles</td>
<td>have become a serious commercial proposition.</td>
</tr>
<tr>
<td>Before 1950</td>
<td>antibiotic drugs</td>
<td>were not widely available.</td>
</tr>
</tbody>
</table>
INTRODUCTIONS AND CONCLUSIONS

It is important to avoid opening sentences which are over-general and vague.

Compare:

Nowadays there is a lot of competition among different news providers. X

In the last 20 years newspapers have faced strong competition from the internet for news and entertainment. V

- **Working quickly, write introductory sentences for three of the following titles.**
  a) How important is it for companies to have women as senior managers?
  b) Are there any technological solutions to global warming?
  c) What can be done to reduce infant mortality in developing countries?
  d) Compare the urbanisation process in two contrasting countries.

4 Conclusions

Conclusions tend to be shorter and more varied in format than introductions. Some articles may have a ‘summary’ or ‘concluding remarks’. But student papers should generally have a final section which summarises the arguments and makes it clear to the reader that the original question has been answered.

- **Which of the following are generally acceptable in conclusions?**
  a) A statement showing how your aim has been achieved.
  b) A discussion of the implications of your research.
  c) Some new information on the topic not mentioned before.
  d) A short review of the main points of your study.
  e) Some suggestions for further research.
  f) The limitations of your study.
  g) Comparison with the results of similar studies.
  h) A quotation which appears to sum up your work.
INTRODUCTIONS AND CONCLUSIONS

Match the following extracts from conclusions with the preceding acceptable features of conclusions. Example: a = vi

i) As always, this investigation has a number of limitations to be considered in evaluating its findings.

ii) These results suggest that the risk of flooding on this coast has increased significantly and is likely to worsen.

iii) Several hurdles that we encountered provide a point of departure for subsequent studies.

iv) Our review of 13 studies of strikes in public transport demonstrates that the effect of a strike on public transport ridership varies and may either be temporary or permanent.

v) These results of the Colombia study reported here are consistent with other similar studies conducted in other countries (Baron and Norman, 1992).

vi) This study has clearly illustrated the drawbacks to family ownership of retail businesses.

5 Conclusion structure

Although there is no fixed pattern, a common structure for an essay conclusion is:

a) Summary of main findings or results

b) Link back to the original question to show it has been answered

c) Reference of the limitations of your work (e.g. geographical)

d) Suggestions for future possible related research

e) Comments on the implications of your research

6 Practice

The following sentences form the conclusion to the essay titled 'Evaluate the experience of e-learning for students in higher education', whose introduction was given on page 78. The sentences have been mixed up. Put them into a logical order (1–5).

a) This finding was clear, despite the agreed convenience of e-learning.

b) Given the constraints of the small and limited sample, there is clearly
room for further research in this field, in particular to explore whether certain disciplines are more suited to this mode of learning than others.

c) However, our survey of nearly 200 students found a strong preference for traditional classroom teaching.

d) But in general it would appear that e-learning is unlikely to be acceptable as a primary teaching method in higher education.

e) This study found that little relevant research on the HE student experience of e-learning has been conducted, and the research that has been reported indicates a mixed reaction to it.
CHAPTER 4

ACADEMIC AND SCIENTIFIC CONVENTIONS

This chapter is excerpted from
Academic Writing for International Students of Science
by Jane Bottomley
© 2014 Taylor & Francis Group. All rights reserved.
ACADEMIC AND SCIENTIFIC CONVENTIONS

This chapter will introduce common academic and scientific conventions. Adopting these conventions will help you to be a part of your academic community, and to produce work which is clear, consistent and easy to follow.

1 Referencing conventions

In this section, we will examine the various conventions associated with referencing. It is very important to reference clearly in order to:

- acknowledge the source of information and ideas;
- allow the reader to find a source easily;
- avoid plagiarism.

■ Explorative Task

Look at the journal extracts and compare how references are presented.

■ Text A

In terms of heat regulation the largest terrestrial animal – the elephant – is a case in point. Owing to its enormous body mass, the small surface-to-volume ratio and the lack of sweat glands (Spearman, 1970; Hiley, 1975; Wright, 1984; Mariappa, 1986), elephants are confronted with unusual problems concerning heat dissipation and drying of the integument (Lillywhite and Stein, 1987). Control of skin temperature (Ts) is an extremely important mechanism in elephants’ temperature regulation (Phillips and Heath, 1995) and the most important thermoregulatory organs to use this pathway are the elephants’ ears. The ears of the African elephant (*Loxodonta africana*) have a large surface-to-volume ratio as well as an extensive and prominent vascular supply, which predestines these organs for optimal heat dissipation (Wright, 1984). In conjunction with their great importance in thermoregulation, the ears are frequently termed “thermal windows” (Wright, 1984; Williams, 1990). Thermal windows are body areas responsible for heat exchange. This is achieved by modifying and controlling blood flow (via vasoconstriction and vasodilation) into these areas (Sumbera et al., 2007).

(Weissenbock *et al.*, 2010: 182)

■ Text B

In subtropical Hong Kong, most of the electricity consumed in commercial
buildings is used for creating a thermally and visually comfortable built-environment through air conditioning and artificial lighting. Recent work on computer energy-simulation studies for Hong Kong revealed that air-conditioning accounts for over 50% of the total electricity consumption in commercial buildings and electric lighting comes second with 20–30% [1]. Passive solar design and daylighting, which makes use of natural light to reduce electric lighting energy consumption, have long been recognized as potential energy-efficient design strategies for buildings [2,3].

(Danny et al., 2007: 1199–1200)

- Text C

The current WHO definition of health, formulated in 1948, describes health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.” At that time this formulation was groundbreaking because of its breadth and ambition. It overcame the negative definition of health as absence of disease and included the physical, mental, and social domains. Although the definition has been criticised over the past 60 years, it has never been adapted. Criticism is now intensifying, 2–5 and as populations age and the pattern of illness changes the definition may even be counterproductive.

(Huber et al., 2011)

There are a number of referencing systems in use across academia and science. These systems are organised around two styles of referencing:

1. Name and date, e.g. Text A
2. Numbers, e.g. Text B and C

The name-date style of referencing is commonly referred to as the Harvard system. If your university or department uses this term, they are stipulating the use of a name-date system. They may provide their own guidelines, or they may specify use of a particular style guide.

Two name-date system style guides commonly used in science are:

- APA (American Psychological Association).
- Chicago
A widely used number system style guide in the engineering disciplines is:

- IEEE

The Royal Society of Chemistry provides guidelines for chemists.

These style guides provide information on referencing, including in-text referencing and listing references at the end of a text. They also provide guidelines on other features of academic and scientific texts such as formatting text and the presentation of figures, tables and equations.

Whatever system you use, it is important that your references are complete, accurate and consistent. There are a number of software packages that can help you with this, such as Mendeley or Zotero. These are usually available through university libraries.

**Reflective Task**

*You have now explored some of the different ways in which scientific writers apply referencing conventions. As a reader of scientific articles, it is useful for you to know about these differences. However, for you as a writer, it is important that you know how to find out about the preferred conventions within your discipline or department, and learn how to apply these in your own writing.*

1. How can you find out about referencing conventions within your discipline and department?
2. Is this outlined on your departmental or school website, or on the library website?
3. Is a particular system specified? Which one?
4. Find some articles in key disciplinary journals which apply this referencing system.

**2 Incorporating quotation**

The use of direct quotation is relatively rare in the sciences in comparison with other academic disciplines such as those in the humanities. However, it can be useful, particularly when defining terminology. The examples discussed in this section show some common textual features associated with direct quotation, but remember to consult your style guide for specific instructions when you are writing.
ACADEMIC AND SCIENTIFIC CONVENTIONS

Excerpted from Academic Writing for International Students of Science

- Exploratory Task

Look through some articles in your field.

1. Can you find any examples of direct quotations?
2. Why do you think the writers have chosen to use direct quotation at this point in the text?
3. What do you notice about the way the quotations are integrated into the text?

Quotations can be incorporated into the grammar of the sentence, e.g.

Complementary and alternative medicine (CAM) can be defined as 'diagnosis, treatment, and/or prevention which complements mainstream medicine by contributing to a common whole, by satisfying a demand not met by orthodoxy or by diversifying the conceptual frameworks of medicine'.

McDougal has also observed that the prevailing approach surrounding questions of reproductive decision-making is "based on the notion of the primacy of parental procreative liberty"


Note that:
- the punctuation comes outside of the quotes here as they are not complete sentences;
- the page number is included in the name-date reference (usually preceded by a colon or comma).

Sometimes, you may not need to use a long string of quotation, just key phrases, e.g.

Complementary and alternative medicine (CAM) can be defined as ‘diagnosis, treatment, and/or prevention’ complementing orthodox medicine. It contributes to ‘a common whole’ by fulfilling a need not met by traditional medicine or by ‘diversifying the conceptual frameworks of medicine’.

If the quotation is a full sentence, it is often introduced with a colon, e.g.

McDougal makes the following observation: ‘The current approach surrounding questions of reproductive decision-making is based on the notion of the primacy of parental procreative liberty.’

(2005, 601)
Note that the punctuation comes within the quote here as it is a complete sentence.

A longer ‘block quotation’ is also often introduced with a colon and indented, and usually occurs without quotation marks. It may also have a different format to the rest of the text: the font size may be smaller and the line spacing reduced, as stipulated in the guidelines of the institution or publisher. The reference usually follows the quote (after the final full stop), e.g.

Other potential risks of harm raised in the debate relate to the psychological impact on the child in knowing that he or she was selected on the basis of his or her particular characteristics (in this case, on the basis of tissue type) (see Ram 2006, 280). Stephen Wilkinson summarizes these as follows:

There seem to be two linked but analytically separate concerns here: first, that a future child may suffer psychological harm if she finds out that she was not wanted for herself, but as a means to save the life of a sibling; and, second, that a child conceived for this reason is likely to enjoy a less close and loving relationship with its parents.

(2010, 113)

Note from the examples given that both single and double quotation marks occur in scientific journals. Follow your style guide or the guidelines given by your department. If there are no guidelines on this, just ensure you are consistent.

Sometimes, not everything in a quote will be relevant or necessary. You can indicate that you have left something out with ellipses, in square brackets (to make it clear that it is you and not the quoted writer who is omitting something), e.g.

Complementary and alternative medicine (CAM) can be defined as ‘diagnosis, treatment, and/or prevention which complements mainstream medicine […] satisfying a demand not met by orthodoxy or by diversifying the conceptual frameworks of medicine’.

You can also use square brackets to indicate any changes or additions you have made to the quote to make it fit in with your grammar or sense, e.g. if the actual quote is:

It is diagnosis, treatment, and/or prevention which complements mainstream medicine.
you may need to change it to:

[Complementary and alternative medicine] is diagnosis, treatment, and/or prevention which complements mainstream medicine.

If something is followed by [sic], it means that there is something in the original which is factually or grammatically incorrect.

■ Practice Task

Incorporate the quotations, in full or just using some parts, into your own sentences, and reference appropriately.

1) 'Polymers are substances that have macromolecules composed of many repeating units (known as "mers").' (Oxford Dictionary of Science, 2005: 648)

The Oxford Dictionary of Science defines

2) 'The basic structure of an atom consists of a nucleus surrounded by a cloud of electrons.' (Atkins, 2013: 17)

The structure of an atom

3) 'From Pythagoras to string theory, the desire to comprehend nature has been framed by the Platonic ideal that the world is a reflection of some perfect mathematical form.' (Smolin, 1997, in Dawkins, 2008: 363)

According to Smolin,

4) 'The period from 1950 to 1960 was truly the golden age of antibiotic discovery, as one half of the drugs commonly used today were discovered in this period.' (Davies, 2006: 287)

Davies describes the period from 1950 to 1960

3 Tables and figures

Tables and figures are a useful way of presenting information in an accessible way. The examples discussed here show some common textual features associated with
ACADEMIC AND SCIENTIFIC CONVENTIONS

Tables and figures, but remember to consult your style guide for specific instructions when you are writing.

- **Exploratory Task**

  1) What do you notice about the way these tables and figures are labelled?

  2) What expressions in the accompanying texts are used to refer directly to the tables and figures?

---

**Figure 3.1** Illustration of a C$_{60}$ molecule

C$_{60}$ is a spherical molecule consisting of 60 carbon atoms arranged in a soccer ball shape as shown in Figure 3.1.

(Kuno, 2012: 30. Reprinted with the kind permission of Garland Science/Taylor and Francis LLC)
Figure 6.11 An illustration of the changes in deaths caused by infectious diseases over a century in the United States.

Health departments at the local and state levels require that doctors and hospitals report certain diseases. This type of information has been able to show how the effects of infectious diseases have changed over the years (Figure 6.11).

(Strelkauska et al., 2010: 111. Reprinted with the kind permission of Garland Science/Taylor and Francis LLC.)
ACADEMIC AND SCIENTIFIC CONVENTIONS

Figure 7.4 Global injury mortality by cause, 2002. Source: WHO, 2004, Fig. 2.1, p.34.
Worldwide, but especially in the developing world, injury and/or accidents are a very important, varied and growing cause of mortality and long-term disability (Figure 7.4). (McCracken and Phillips, 2012: 175. Reprinted with the kind of permission of the World Health Organisation)

Figure 62.3 Global surface air temperatures since 1850 Temperature anomaly = difference from 1961-90 mean) Climate Research Unit, University of East Anglia, 2009).
Global temperatures are increasing rapidly at a seemingly unprecedented rate (Fig. 62.3), but it is worth noting that changes in global temperature and atmospheric carbon dioxide levels are nothing new.
(Domone and Illston, 2010: 536. Reprinted with the kind permission of the Climatic Research Unit)
### Table 52.4 Average green moisture content of the sapwood and heartwood

<table>
<thead>
<tr>
<th>Botanical name</th>
<th>Commercial name</th>
<th>Moisture content (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Heartwood</td>
<td>Sapwood</td>
</tr>
<tr>
<td>Hardwoods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Betula lutea</td>
<td>Yellow birth</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td></td>
<td>68</td>
</tr>
<tr>
<td>Fagus grandifolia</td>
<td>American beech</td>
<td>58</td>
</tr>
<tr>
<td></td>
<td></td>
<td>79</td>
</tr>
<tr>
<td>Ulmus americana</td>
<td>American elm</td>
<td>92</td>
</tr>
<tr>
<td></td>
<td></td>
<td>84</td>
</tr>
<tr>
<td>Softwoods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pseudotsuga menziesii</td>
<td>Douglas fir</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>116</td>
</tr>
<tr>
<td>Tsuga heterophylla</td>
<td>Western hemlock</td>
<td>93</td>
</tr>
<tr>
<td></td>
<td></td>
<td>167</td>
</tr>
<tr>
<td>Picea sitchensis</td>
<td>Sitka spruce</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>131</td>
</tr>
</tbody>
</table>

The degree of variation is illustrated for a number of softwoods and hardwoods in Table 52.4.

(Domone and Illston, 2010: 425)

### Table 9.1 Characteristics of Gram-Positive and Gram-Negative Bacteria

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Gram-Positive Bacteria</th>
<th>Gram-Negative Bacteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peptidoglycan</td>
<td>Thick layer</td>
<td>Thin layer</td>
</tr>
<tr>
<td>Teichoic acid</td>
<td>Present</td>
<td>Absent</td>
</tr>
<tr>
<td>Lipids</td>
<td>Very little</td>
<td>Lipopolysaccharide layer</td>
</tr>
<tr>
<td>Outer membrane</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Toxins</td>
<td>Exotoxins</td>
<td>Endotoxins</td>
</tr>
<tr>
<td>Sensitivity to antibiotics</td>
<td>Very sensitive</td>
<td>Moderately sensitive</td>
</tr>
</tbody>
</table>

The difference between the Gram-positive cell wall and the Gram-negative cell wall is significant. Table 9.1 compares the two types of cell wall.

(Srelkauska et al., 2010: 160. Reprinted with the kind permission of Garland Science/Taylor and Francis LLC)
ACADEMIC AND SCIENTIFIC CONVENTIONS

1) Tables are usually labelled at the top; figures are usually labelled at the bottom, but consult your style guide for specific guidelines.

2) Note the different types of figure (diagram, bar chart, pie chart, line graph) common in scientific texts. You may also need to make use of other types such as flow charts, and chemical drawings and schemes.

3) As you can see from the examples, there is some variation across texts regarding how titles, table headings and figure labels are formatted, though it is common to write Table and Figure in bold.

4) If the table or figure is taken from another source, it must be referenced using the appropriate system.

5) The important thing is to follow any guidelines you have been given and to be clear and consistent.

■ Practice Task (i)

Use the following words in the right form to complete the following phrases commonly used to refer to tables and figures: show; illustrate; list; see; compare; demonstrate

1. The changes in temperature are _______ in Table 3.8.
2. Figure 3 _______ the different shapes of brick available.
3. The results of the experiment can be _______ in Table 2.
4. The graph _______ data obtained from four donors.
5. One of the symptoms is a rash, as _______ in Figure 10.2.
6. Table 2 _______ the major differences between the two cell types.

■ Practice Task (ii)

1) Complete the text accompanying the graph with the following verbs in the correct form:

double; decline
Figure 62.5 World and UK steel production (World Steel Association, 2009).

World steel production nearly _____ between the mid-1990s and 2008 (Fig. 62.5), and is expected to double again by 2050, with some fluctuations due to the global economic conditions (World Steel Association, 2009). Production in the UK _____ by about 40% in the same period.

(Domone and Illston, 2010: 541. Reprinted with the kind permission of the World Steel Association)

2) Use the structures from the tables to write more sentences about the graph in 1.

Table 9.1

<table>
<thead>
<tr>
<th>world/UK steel production</th>
<th>doubled</th>
<th>halved</th>
<th>increased/decreased (by)</th>
<th>went up/down (by)</th>
<th>declined</th>
<th>plummeted</th>
<th>levelled off</th>
<th>fluctuated</th>
<th>steadily</th>
<th>sharply</th>
<th>significantly</th>
<th>slightly</th>
<th>between x and y in the same period</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


## Table 9.2

<table>
<thead>
<tr>
<th>there was</th>
<th>steady sharp significant slight</th>
<th>rise/fall increase/decrease decline</th>
<th>In world/UK steel production</th>
<th>between x and y in the same period</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 4 Equations

Equations are common throughout scientific writing, and it is important to present them clearly and consistently. The examples discussed here show some common textual features associated with equations, but remember to consult your style guide for specific instructions when you are writing.

- **Explorative Task**
  1. What do you notice about the way these equations are introduced, formatted and referenced?
  2. Which phrases in the accompanying texts are used to refer to the equations directly?

- **A**

  The earth's atmosphere is oxidising. Nearly all of the earth's crust consists of oxides, which indicates that this is the preferred minimum energy state for most materials. Gold and silver are the only two metals that are found in their native, unoxidised state. The general oxidising reaction can be written as:

  \[ M + O \rightarrow MO \]  \hspace{2cm} (10.1)

  where \( M \) is the metal and \( O \) is the oxygen.
ACADEMIC AND SCIENTIFIC CONVENTIONS

- **B**

When an element or compound burns in dioxygen to give an oxide, it is oxidised (equation 1.42).

\[2\text{Mg}(s) + \text{O}_2(g) \rightarrow 2\text{MgO}(s)\]  \hspace{1cm} (1.42)

Conversely, if a metal oxide reacts with dihydrogen and is converted to the metal, then the oxide is reduced (equation 1.43).

\[\text{Heat} \quad \text{CuO}(s)+ \text{H}_2(g) \rightarrow \text{Cu}(s) + \text{H}_2\text{O}(g)\]  \hspace{1cm} (1.43)

In reaction 1.42, \text{O}_2 is the oxidising agent and in reaction 1.43, \text{H}_2 is the reducing agent.

1. In A, the equation is integrated into the sentence (can be written as . . . where \text{M} is the metal and \text{O} is the oxygen). In this case, the equation is introduced with a colon, and the sentence continues after the equation (so does not begin with a capital letter). An equation can also be preceded and followed by complete sentences, as in B ('In reaction 1.42, \text{O} is the oxidising agent and in reaction 1.43, \text{H}_2 is the reducing agent').
2. The equation is usually indented.
3. The equation is usually referenced on the far right of the page.
4. The important thing is to follow any guidelines you have been given and to be clear and consistent.

- **Practice Task**

*Rewrite the text with the formatting and punctuation used in the examples discussed earlier.*

If a soap film is stretched across a frame with a moveable wire, the force required to hold the wire in place is \(F = 2yl\) (6.1) where \(l\) is the length of the wire, \(y\) is the surface tension of the soap film/air interface and the factor 2 is introduced because the film has two surfaces.

- **Model Text 12, Appendix 4**

5 Units of measurement

Measurements are usually presented following the SI (Système International
d’Unités). The following are used widely throughout the scientific world. Note the use or non-use of capital letters and spaces in the examples.

- Measuring length

**Table 9.3**

<table>
<thead>
<tr>
<th>Unit</th>
<th>Abbreviation</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metre</td>
<td>m</td>
<td>100 m</td>
</tr>
<tr>
<td>Centimetre</td>
<td>cm</td>
<td>50 cm</td>
</tr>
<tr>
<td>Millimetre</td>
<td>mm</td>
<td>10 mm</td>
</tr>
<tr>
<td>Nanometre</td>
<td>nm</td>
<td>400 nm</td>
</tr>
</tbody>
</table>

- Weighing mass

**Table 9.4**

<table>
<thead>
<tr>
<th>Unit</th>
<th>Abbreviation</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kilogram</td>
<td>kg</td>
<td>40 kg</td>
</tr>
<tr>
<td>Gram</td>
<td>g</td>
<td>100 g</td>
</tr>
<tr>
<td>Milligram</td>
<td>mg</td>
<td>20 mg</td>
</tr>
</tbody>
</table>

- Measuring volume

**Table 9.5**

<table>
<thead>
<tr>
<th>Unit</th>
<th>Abbreviation</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Litre</td>
<td>l</td>
<td>4 l</td>
</tr>
<tr>
<td>Millilitre</td>
<td>ml</td>
<td>20 ml</td>
</tr>
<tr>
<td>cubic metre</td>
<td>m$^3$</td>
<td>4 m$^3$</td>
</tr>
</tbody>
</table>
Other useful abbreviations

Table 9.6

<table>
<thead>
<tr>
<th>Unit</th>
<th>Abbreviation</th>
<th>Used to measure</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>degree Celsius</td>
<td>°C</td>
<td>temperature</td>
<td>30°C</td>
</tr>
<tr>
<td>square metre</td>
<td>m²</td>
<td>area</td>
<td>5 m²</td>
</tr>
<tr>
<td>Minute</td>
<td>min</td>
<td>time</td>
<td>25 min</td>
</tr>
</tbody>
</table>

Practice Task

Correct the mistakes in the way the measurements are written.

1. Temperatures may reach 40°C.
2. The wire measured 2mm in diameter.
3. The machine weighs 44 Kg.
4. Measure 2 ls of water.
5. 2 g of solution were added to every m3 of water.

6 Acronyms and abbreviations

Acronyms and abbreviations can be useful in academic scientific writing.

- **Acronyms** are formed using the first letter of each word in a phrase, capitalised, e.g.
  
  The UN (United Nations)
  
  The RSC (Royal Society of Chemistry)

- **Abbreviations** are formed by shortening a word, e.g.
  
  esp. (especially)
  
  etc. (from the Latin *et cetera*, meaning ‘and others’)

Reflective Task

What are some common acronyms used in the texts in your scientific discipline?
ACADEMIC AND SCIENTIFIC CONVENTIONS

Excerpted from Academic Writing for International Students of Science

- **Explorative Task**

  Look at the text and complete the rule which follows about using acronyms by choosing the correct option. The recent uptake of mobile phones has been accompanied by some concern about possible health risks. In the general population, the health effects most often attributed to mobile phone use are non-specific symptoms. Excluding sensations of mild warmth, the most commonly reported symptoms are headache, burning, dizziness, fatigue, and tingling. Mechanisms to explain these phenomena remain speculative, and, although the pulsing nature of ‘global system for mobile communication’ (GSM) signals has been suggested to be partly to blame, experiments that have exposed healthy adults to GSM signals under blind conditions have not found any significant effects on the reporting of symptoms.

  (Rubin, 2006)

<table>
<thead>
<tr>
<th>RULE FOR ACRONYM USE</th>
</tr>
</thead>
<tbody>
<tr>
<td>When mentioning a term for the first time, use the full term/the acronym/either and put the full term/the acronym/either in brackets afterwards. After this, always use the full/term/the acronym/either.</td>
</tr>
</tbody>
</table>

- **Practice Task**

  *Rewrite the text with correct use of acronyms.*

  GM foods are becoming more widely available. Many see the increased production of GM (genetically modified) crops as an important tool in the fight against world hunger. However, others are concerned by the possible effects of these foods on health.

  ▶ **Model Text 13, Appendix 4**

- **Explorative Task**

  *Identify the abbreviations in these sentences and complete the table which follows.*

  1. The report recommends encouraging higher consumption of legumes, e.g. lentils and chickpeas.
ACADEMIC AND SCIENTIFIC CONVENTIONS

2. Atmospheric nitrogen needs to be ‘fixed’, i.e. converted into a form that can be used by plants.
3. The chapter outlines common garden experiments (cf. contrasting garden experiments, pp. 45-7).
4. N.B. Protective clothing must be worn at all times.

Table 9.7

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Derivation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>sentence 1</td>
<td>exempli gratia</td>
<td></td>
</tr>
<tr>
<td>sentence 2</td>
<td>id est</td>
<td></td>
</tr>
<tr>
<td>sentence 3</td>
<td>confer</td>
<td></td>
</tr>
<tr>
<td>sentence 4</td>
<td>nota bene</td>
<td></td>
</tr>
</tbody>
</table>

7 Bullet point and numbered lists

Lists with numbers or bullet points are a useful way of organising information. There is some variation in the formatting of these lists, so be sure to consult your style guide.

- **Explorative Task**
  1. 1) What differences do you notice in the formatting of these lists?
  2. 2) How are references given?

- **A**

The desired properties of a sealant are:

- a good adhesion with the joint
- low rate of hardening
- low rate of shrinkage
- permanent elasticity.
ACADEMIC AND SCIENTIFIC CONVENTIONS

B

Much of the output of the construction industry comprises buildings and structures that subsequently consume vast quantities of energy for heating, lighting, maintenance etc. while in service. Over their entire lifespan, structures are responsible for (Toyne, 2007):

- 40% of the world’s energy use
- 40% of the world’s solid waste generation
- 40% of the world’s greenhouse gas emissions
- 33% of resource use
- 12% of water use.

C

Significant health differences between occupational groups are found in all countries. In part these reflect the direct influences on health of workplace hazards. Depending on their particular work environment, workers may be exposed to:

- physical hazards – e.g. heat, noise, radiation, dust, vibration;
- mechanical hazards – e.g. unsafe structures, unshielded machinery;
- chemical hazards – e.g. pesticides, solvents, gases, acids, metals;
- biological hazards – e.g. bacteria, parasites, viruses;
- psycho-social hazards – e.g. stress, monotony, workforce bullying, excessively long working hours; and
- regulatory hazards – e.g. inadequate safety standards, poor enforcement frameworks.

D

There are four main techniques for achieving stable masonry:

1. Irregularly shaped and sized but generally laminar pieces are selected and placed by hand in an interlocking mass (e.g. dry stone walls).
2. Medium to large blocks are made or cut very precisely to one or a small range of interlocking sizes and assembled to a basic grid pattern either without mortar or with very thin joints (e.g. ashlar or thin-joint).
3. Small to medium units are made to normal precision in a few sizes and assembled to a basic grid pattern, and inaccuracies are taken up by use of a
packing material such as mortar (e.g. normal brickwork).
4. Irregularly shaped and sized pieces are both packed apart and bonded
together with adherent mortar (e.g. random rubble walls).

1) The items in the list can be words or phrases which form part of the
introductory sentence.

These are usually introduced with a colon, and do not usually start with a capital
letter (A, B, C).

In this case, each item may be unpunctuated, except for the last one, which usually
ends in a full stop as it is the end of the whole sentence (A, B).

Alternatively, the items before the last can be separated by semicolons (C).

Sometimes *and* is used to join the last two options.

2) Items can sometimes be written as full sentences, each beginning with a
capital letter and ending with a full stop (D).

These are usually preceded by a colon or a full stop.

3) References which apply to the whole list are usually included in the
introductory sentence (B).

[Practice Task]

*Rewrite the following as a bullet point list.*

Newton – 3 laws of motion – first law: a body continues in its state of rest of
uniform motion in a straight line unless acted upon by an external force;
second law: the rate of change of momentum of a body is proportional to the
applied force and takes place in the direction in which the force acts; third law:
for every action there is an equal and opposite reaction.

[Model Text 14, Appendix 4]

Note that the list can also be contained within the main text, e.g.

The elephants were observed in the following defined situations: (1) indoors, (2)
outdoors, and (3) return to indoors.

Note the use of the colon, commas and the use of ‘and’ before the final item in the
list.
8 UK versus US spelling

There are a number of spelling differences between UK and US English.

- **Explorative Task**

1) Add the title UK or US to these lists.

<table>
<thead>
<tr>
<th>A__________</th>
<th>B__________</th>
</tr>
</thead>
<tbody>
<tr>
<td>colour, behaviour, labour</td>
<td>color, behavior, labor</td>
</tr>
<tr>
<td>centre, metre</td>
<td>center, meter</td>
</tr>
<tr>
<td>travelling</td>
<td>traveling</td>
</tr>
<tr>
<td>prioritise, stabilise</td>
<td>prioritize, stabilize</td>
</tr>
<tr>
<td>offence, defence, practice (noun)/practise (verb)</td>
<td>offense, defense, practice (noun and verb)</td>
</tr>
</tbody>
</table>

2) Which US spelling is also now commonly used in the UK?

It is probably best to use the spelling system used in your country of study. Certain publications may require UK or US spelling. However, the most important thing is to be consistent, and not mix the two.

9 Formatting and presentation

It is important that any written work you submit is professional, that it is clearly presented, and has clear and consistent formatting. This will show that you have worked with care and attention to detail. It will also make your work easier to read. Your style guide or department will provide you with specific details, but some general guidelines are:

- Use a clear font such as Times New Roman;
- Use 1.5 or double spacing;
- Make titles and subtitles clear and consistent;
- Make sure new paragraphs are clearly separated by leaving a line space, indenting or both;
- Include page numbers.
The following reflective and review tasks will help you to consolidate your understanding of Chapter 9.

**Reflective Task**
1. Which of the conventions covered in this chapter are most important in your discipline?
2. Are there any other conventions that are important in your discipline?

**Review Task**
1. Select a text that you have written or are in the process of writing.
2. Try to improve the text by focusing on your use of the conventions covered in this chapter.

In this chapter, we have examined the various conventions associated with scientific writing. The final piece in the scientific writing jigsaw! Good luck on the rest of your scientific writing journey!
Both essays and reports may include case studies, which are detailed examples illustrating the topic under discussion. One case study may be the main subject of an essay, or several may be included to illustrate different situations.

1. Using case studies

A case study attempts to show exactly what happened in a particular situation. For example, if you are studying microfinance, you might look at the performance of one particular scheme in a district of Dhaka, in Bangladesh.

What are the advantages of including case studies?

Are there any disadvantages?

- **Match the topics on the left with the example case studies on the right.**

<table>
<thead>
<tr>
<th>Topics</th>
<th>Case studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improving crop yields in semi-deserts</td>
<td>A study of a French supermarket training programme</td>
</tr>
<tr>
<td>Encouraging entrepreneurship in Africa</td>
<td>The Berlin experiment: increasing public participation in collecting and sorting waste</td>
</tr>
<tr>
<td>Approaches to motivation in the service sector</td>
<td>Using solar power to operate irrigation pumps in Ethiopia</td>
</tr>
<tr>
<td>The impact of the housing market on the wider economy</td>
<td>A Moroccan scheme for supporting new business start-ups</td>
</tr>
<tr>
<td>Improving recycling rates in large cities</td>
<td>The effect of the Spanish property price crash of 2008</td>
</tr>
</tbody>
</table>
CASE STUDIES

2. Model case study

- Read the following example of a case study, taken from a longer essay, and answer the questions below.

Topic: Adapting international brands to local markets

Case Study: The experience of IKEA in China

Introduction

The Chinese economy has expanded at an annual average rate of about 7% for the past 20 years. Parallel to this, the Chinese furniture industry has grown vigorously, with annual sales recently rising by over 20% a year. Legislation to privatise home ownership and rapidly rising income levels have created unprecedented growth in the home improvement sector, and China is now the world’s second largest furniture market. This demand has boosted domestic production and also prompted international furniture manufacturers to enter this lucrative market.

IKEA, a Swedish furniture company, was one of the international companies which moved into China. It is a major furniture retailer operating in over 52 countries around the world and had annual sales of over €38 billion in 2018 (IKEA website). It entered the Chinese market in 1998 with its first store in Beijing, and sees great potential in the country, having already expanded to 30 stores and five distribution centres. Despite this successful growth, IKEA has found itself facing a number of challenges in terms of local differences in culture and business practices.

Marketing IKEA in China

Marketing management needs to be largely tailored to local contexts. IKEA has kept this notion in mind when designing marketing strategies and trying to appeal to local customers while maintaining profitability. The company attempts to find the best possible compromise between standardisation and adaptation to local markets. Its product policy pays careful attention to Chinese style and integrates the set of product attributes effectively (Armstrong and Kotler, 2006).
The store layouts reflect the floor plan of many Chinese apartments, and since many of these have balconies, the stores include a balcony section. In contrast with traditional Chinese furniture, which is dark with much carving, IKEA introduces a lighter and simpler style. However, efforts have been made to adapt its products to Chinese taste. For instance, it has released a series of products just before each Chinese New Year. In 2008, the year of the rat, the series ‘Fabler’ was designed, using the colour red which is associated with good luck.

Changes were also made to some product ranges. In Sweden, people are used to sleeping in single beds, or to putting two single beds together to form a double bed. However, this idea was not very well received by Chinese couples, due to the fact that sleeping in separate beds symbolises a poor relationship and is believed to bring bad luck. In addition, Chinese brand names should have positive connotations. The Chinese name of IKEA (Yi Jia) means ‘comfortable home’, which gives the company a useful advantage in the market. An important feature of a retailer is the services it offers. The Shanghai store, for instance, has a children’s playground and a large restaurant, which make it distinctive. However, Chinese consumers expect free delivery and installation, and although IKEA has reduced its charges for these, it still compares unfavourably with its competitors.

**Price**

When the company first entered China its target market was couples with an income of 5,000–8,000 Rmb per month. Following steady price reductions this has now been lowered to families with just over 3,000 Rmb. Various strategies have been adopted to achieve these reductions; the most effective being to source locally. 70% of its products sold in China are now made in the country (Song, 2005). Furthermore, IKEA replaced its thick annual catalogue with thinner brochures which now appear five times a year. These not only cut printing costs but also give greater flexibility to adjust prices.

Accessibility is also an important issue for the Chinese market. In most countries IKEA stores are sited near main roads, but as only a minority of likely customers own cars in China, easy access to public transport is vital (Miller, 2004).
CASE STUDIES

Advertising plays an important role in the total promotional mix. IKEA uses advertising effectively, with adverts in the local newspapers to keep customers informed of special offers. All TV commercials are produced locally with Chinese characters. Public relations is also vital to building a good corporate image. In China, IKEA co-operates with the World Wide Fund for Nature (WWF) on forest projects. The company insists on using environmentally friendly and recyclable materials for the packaging of its products, as part of its efforts to build a good corporate image.

Discussion and conclusion

IKEA’s product policy in China has been to successfully standardise products as much as possible, but also customise as much as needed. But quality and price are not the only factors in its success. It has learned that service is also vital: free delivery and installation are the perceived rules in the local market which it needs to follow. It has further found that it is better to locate in a downtown area, easily accessible with public transport, when free delivery is not provided. Currently there is a programme to open smaller stores, which offer a limited range of products, in the centres of large cities, as an alternative to the large stores on the outskirts of the cities.

International companies which operate in China, such as IKEA, face more complicated marketing decisions than local companies. They must become culture-conscious and thoroughly research local requirements rather than simply introduce a standard model of business. However, if these considerations are effectively managed the Chinese market offers great potential for innovative retailers. (890 words)

a) Give examples of problems the company has faced in this market.
b) What has IKEA done to adapt to the Chinese market?
c) What could be done to improve the case study?
CHAPTER 6

WRITING LONGER PAPERS

This chapter is excerpted from
Academic Writing for International Students of Business and Economics
by Stephen Bailey.
© 2020 Taylor & Francis Group. All rights reserved.
Long essays of 3,000–5,000 words may be required as part of a module assessment. These require more time, research and organisation than short essays, and this unit provides a guide to how such an assignment can be approached.

1. Planning your work

Longer assignments are normally set many weeks before their deadline, which means that students should have plenty of time to organise their writing. However, it is worth remembering that at the end of a semester you may have to submit several writing tasks, so it may be a good idea to finish one well before the deadline.

You should also check the submission requirements of your department. These include style of referencing, method of submission (i.e. electronic, hard copy or both) and place and time of submission. Being clear about these will avoid last-minute panic.

--> See Unit 1.5 From Understanding Titles to Planning

• The first thing is to prepare a schedule for your work. An eight-week schedule might look like this:

<table>
<thead>
<tr>
<th>Week</th>
<th>Stages of work</th>
<th>Relevant units in this book</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Study title and make first outline. Look for and evaluate suitable sources</td>
<td>1.2, 1.5</td>
</tr>
<tr>
<td>2</td>
<td>Reading and note-making. Keep record of all sources used</td>
<td>1.2, 1.3, 1.6, 1.8</td>
</tr>
<tr>
<td>3</td>
<td>Reading, note-making, paraphrasing and summarising. Modify outline.</td>
<td>1.2, 1.3, 1.5, 1.7</td>
</tr>
<tr>
<td>4</td>
<td>Write draft of main body.</td>
<td>1.10</td>
</tr>
<tr>
<td>5</td>
<td>Write draft introduction and conclusion.</td>
<td>1.11</td>
</tr>
<tr>
<td>6</td>
<td>Rewrite introduction, main body and conclusion, checking for logical development of ideas and relevance to title.</td>
<td>1.12</td>
</tr>
</tbody>
</table>
WRITING LONGER PAPERS

Excerpted from Academic Writing for International Students of Business and Economics

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Organise list of references, contents, list of figures and appendices if required. Check all in-text citations.</td>
</tr>
<tr>
<td>8</td>
<td>Proofread the whole essay before handing it in. Make sure that the overall presentation is clear and accurate (e.g. is page numbering correct?).</td>
</tr>
</tbody>
</table>

- How you actually plan your schedule is up to you, but the important thing is to organise your time effectively. At some point you have to stop researching and start writing (Week 4 in the example above). Leaving the writing stage until the last minute will not lead to a good mark, however much research you have done. There is little value in collecting a large quantity of data or ideas if you cannot use it to answer the question effectively. Although you may be tempted to postpone writing, the sooner you start the sooner you will be able to begin refining your ideas. Remember that late submission of coursework is usually penalised.

2. Formatting the paper

Longer papers may include the following features, in this order:

<table>
<thead>
<tr>
<th>Title page</th>
<th>Apart from the title, this usually shows the student's name and module title and number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contents page</td>
<td>This should show the reader the basic organisation of the essay, with page numbers.</td>
</tr>
<tr>
<td>List of tables or figures</td>
<td>If the essay includes visual features such as graphs, these need to be listed by title and page number.</td>
</tr>
<tr>
<td>Introduction</td>
<td></td>
</tr>
<tr>
<td>Main body</td>
<td>The main body may be divided into sections with sub-headings in bold for each. Your department may require a numbering system, so the sections of the main body are normally numbered 1, 2, 3 and then subdivided 1.1, 1.2, etc</td>
</tr>
<tr>
<td>Conclusion</td>
<td></td>
</tr>
</tbody>
</table>
### Acknowledgments
A space to thank any teachers or others who have assisted the writer.

### Notes
These are used to give extra details without interfering with the main narrative. Arabic numbers should be used for these.

### List of references
This is a complete list of all the sources cited in the text. Writers occasionally also include a bibliography, which is a list of sources read but not cited.

### Appendices
These sections are for data related to the topic which the reader may want to refer to. Each appendix should have a title and be mentioned in the main body.

---

You must check with your department for details regarding typeface, line spacing, margins and other items. You may have the choice of using end notes, which are collected in a section before the list of references, or footnotes at the bottom of each page.

Page numbers: use Roman numbers (i, ii, iii) for the preliminary section from the title page to the end of the contents page, and then use Arabic numbers (1, 2, 3) to number the rest of the text.

Overall, success with longer papers depends on:

- Having a schedule and keeping to it
- Starting to write the main body early enough
- Being ready to modify your outline if necessary
- Allowing adequate time for editing and proofreading
- Being consistent in formatting e.g. with references
REPORTS AND EXECUTIVES SUMMARIES

This chapter is excerpted from Academic Writing: A Handbook for International Students by Stephen Bailey. © 2020 Taylor & Francis Group. All rights reserved.
Students of Business and Economics may often have to write reports as well as essays. Reports and essays are similar in many ways, but this unit explains and illustrates the differences. Executive summaries are commonly used in business to provide senior managers with a short synopsis of lengthy reports.

1. Writing Reports

While essays are often concerned with abstract or theoretical subjects, a report is a description of a situation or something that has happened. In academic terms it might describe:

a) a problem that you have studied and developed several solutions for

b) a survey you have carried out

c) a proposal for a new product or service.

Most reports should include the following features:

**Introduction**
- background to the subject
- reasons for carrying out the work
- review of other research in the area

**Methods**
- how you did your research
- description of the tools/materials/equipment used

**Results**
- what you discovered
- comments on likely accuracy of results

**Discussion**
- of your main findings
- comments on the effectiveness of your research

**Conclusion**
- summary of your work
2. Essays and reports
In comparison with essays, reports are likely to

a) be based on primary as well as secondary research
b) be more specific and detailed
c) use numbering (1.1, 1.2) and subheadings for different sections.

In most other respects reports are similar to essays since both:

a) have a clear and logical format
b) use an objective and accurate academic style
c) include citations and references
d) make use of visual information in the form of graphs, diagrams and tables
e) include appendices where necessary.

- Decide whether the following titles are more likely to be written as reports or essays

<table>
<thead>
<tr>
<th>Topic</th>
<th>Report</th>
<th>Essay</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The development of trade unions in South Africa (1900–2015)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Two alternative plans for improving college open days for prospective students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. A survey you conducted to compare male and female attitudes to writing essays</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. A study of a struggling retail business and proposals to improve its performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. The macroeconomic consequences of negative interest rates</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. Practice

- Read the following report and answer the questions which follow.

A report on student accommodation at Bullbridge College

Introduction

The quality of accommodation is a crucial concern for most students, since having comfortable and affordable housing can be seen as essential for focussing on academic work. Rising student numbers are putting pressure on existing student residences on the campus, so that the College is currently considering building three new blocks in the College grounds which would accommodate approximately 350 students. However, as the estimated cost of these is about £2.75 million ($3.4 million) there is a counter-proposal to spend the money on better teaching facilities and instead rely on private landlords to provide accommodation off-campus. This report sets out to establish what kind of accommodation students prefer, and secondly to discuss how this can be best provided, given the current financial climate. In order to research this question we conducted a survey of 194 current students living in a range of accommodation. On the basis of these results, we then attempted to evaluate the two main options available to the College.

Accommodation survey

We tried to find out why a cross-section of students had chosen their current rooms and how satisfied they were with their choices by conducting a short survey. About 250 students were sent an online questionnaire and 194 of these were completed. Of these, 55% (106) were from female students and 45% (88) were from males. This broadly reflects the gender balance of the College.

Question 1: What kind of accommodation do you have now?
REPORTS AND EXECUTIVE SUMMARIES

Excerpted from Academic Writing for International Students of Business and Economics

<table>
<thead>
<tr>
<th>Type</th>
<th>College residence on-campus</th>
<th>Student residence off-campus</th>
<th>Shared house or flat – private landlord</th>
<th>At home with parents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>36</td>
<td>14</td>
<td>33</td>
<td>5</td>
</tr>
<tr>
<td>Female</td>
<td>57</td>
<td>11</td>
<td>29</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>93</td>
<td>25</td>
<td>62</td>
<td>14</td>
</tr>
</tbody>
</table>

It can be seen that the most common type of accommodation is in the College residences, and that only a small minority live with their parents. The results also demonstrate that substantially more females than males live in College residences and with their families.

**Question 2:** How satisfied are you with your current accommodation? (Rated 1–5 average results)

<table>
<thead>
<tr>
<th>Type</th>
<th>College residence on-campus</th>
<th>Student residence off-campus</th>
<th>Shared house or flat – private landlord</th>
<th>At home with parents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>3.7</td>
<td>4.6</td>
<td>3.4</td>
<td>2.9</td>
</tr>
<tr>
<td>Female</td>
<td>4.2</td>
<td>4.1</td>
<td>3.6</td>
<td>4.0</td>
</tr>
<tr>
<td>Average</td>
<td>3.95</td>
<td>4.35</td>
<td>3.5</td>
<td>3.45</td>
</tr>
</tbody>
</table>

These results show that the highest levels of satisfaction are found with the off-campus purpose-built residences, provided by private companies. The on-campus College residences are also quite well-liked, but shared houses and flats seem less satisfactory.

**Question 3:** What do you like and dislike about your current accommodation?
### Reports and Executive Summaries

Excerpted from *Academic Writing for International Students of Business and Economics*

<table>
<thead>
<tr>
<th>Type</th>
<th>College residence on-campus</th>
<th>Student residence off-campus</th>
<th>Shared house or flat – private landlord</th>
<th>At home with parents</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Likes</strong></td>
<td>convenient make friends</td>
<td>well-equipped near town centre</td>
<td>cheap can choose friends to share with</td>
<td>economical comfortable</td>
</tr>
<tr>
<td><strong>Dislikes</strong></td>
<td>expensive noisy</td>
<td>small rooms expensive</td>
<td>arguments with flatmates poor quality fittings</td>
<td>less freedom can’t have friends to stay</td>
</tr>
</tbody>
</table>

**Analysis**

The survey might have been improved by asking a greater number of students, but 194 responses does provide a significant sample. Perhaps a more serious drawback is that it did not distinguish between different years: first year students may well have different priorities (e.g. making friends) to final year students (who may value the independence of a shared house). However, the results obtained do support anecdotal reports of student preferences.

**Conclusion**

Clearly living with parents is an option only open to a limited number of students with families living locally, so there are basically three types of student accommodation. Some students will prefer to save money by sharing flats and houses with their friends, and in fact there is a good supply of this type of accommodation provided by private landlords.

The off-campus student residences appear to be rather more popular than the College residences, and from the College’s point of view they require no investment. Provided that more of these can be built to accommodate rising student numbers it would seem better for the college to spend its limited capital on new teaching facilities.

*a) How could the report be improved?*

*b) Is anything missing from the report?*
4. Executive summaries

As the name suggests, with business reports and proposals it is common to preface the texts with a short summary of the main points and conclusions. This allows senior managers to keep abreast of the situation, without needing to study unnecessary detail.

The summary should be written after the report is finalised, and in general will be no more than 10% of the original length.

An effective summary will, depending on the situation:

- explain the issue being discussed
- describe the various options
- identify the best course of action
- give reasons to support this.

There is no need to include statistical data and other details since the reader always has the option of studying the full report.

- Write an executive summary of the report above in 60–70 words.
ISSUES IN THESIS AND DISSERTATION IN ENGLISH AS A SECOND LANGUAGE

This chapter is excerpted from
By Brian Paltridge, Sue Starfield
© 2019 Taylor & Francis Group. All rights reserved.

Learn more
ISSUES IN THESIS AND DISSERTATION WRITING IN ENGLISH AS A SECOND LANGUAGE

Excerpted from *Thesis and Dissertation Writing in a Second Language*

**Introduction**

All students writing a research thesis face the new challenge of having to manage large amounts of text across a lengthy period of time – 80,000 words is the typical length of a doctoral thesis or dissertation in many countries. Prior’s (1998) in-depth study of graduate students writing within their disciplines clearly shows that many students, regardless of their backgrounds, struggle with writing at an advanced level; it is both quantitatively and qualitatively a different task to their previous experiences of academic writing. This challenge is heightened for second language speakers as they may struggle simultaneously in several domains, all of which have been identified as influencing academic writing at an advanced level. This chapter discusses four clusters of issues which can directly impact on second language speakers writing a thesis or dissertation in English. While these four factors may impact on all thesis and dissertation writers, it is their intensity and co-occurrence in combination with the need to expand and extend one’s linguistic resources in English which may make the challenges for second language writers harder.

Each of the issues will be discussed, in turn:

- emotional issues
- behavioural issues
- rhetorical issues (how language and the conventions of thesis and dissertation writing are used to persuade the reader of the validity of the writer’s arguments)
- social issues

**Emotional issues**

Under this heading a cluster of related issues can be grouped which may directly affect a student’s ability to write. We tend to downplay the significance of emotional issues on our research and writing but research is showing that emotional well-being can directly impact on our capacity to begin and to keep writing over the time of the thesis. For example, a large-scale study of the extent to which graduate students at a US university felt anxious about their writing ability found that students who spoke English as a second language had higher writing anxiety than their native English speaker counterparts and felt less confident about their ability (Huerta et al., 2017). Writing anxiety has been shown to correlate with fear of failure and a tendency toward procrastination.
ISSUES IN THESIS AND DISSERTATION WRITING IN ENGLISH AS A SECOND LANGUAGE

(Russell-Pinson & Harris, 2019).

A key factor affecting both graduate students and professors has been identified as the ‘impostor’ phenomenon or ‘impostor syndrome’ (Clance & Imes, 1978). This is the belief that you are not really competent enough or qualified to be in the position or role you are in and that others will find this out and you will be exposed as a ‘fraud’ who doesn’t deserve to be there.

The ‘impostor’ phenomenon

How could feelings of being an ‘impostor’ be affecting you? It may be that you are avoiding showing drafts of your chapters to your supervisor as you are worried that he or she will say they are not good enough. It may be that this anxiety is making it hard for you to write. You may be anxious about asking questions in seminars in case others think you’ve asked a silly question or made a language error. These feelings could be leading to procrastination, that is, putting off writing.

It is important for students to understand that feelings of a lack of confidence, fear of failure, and rejection are not uncommon. Sometimes, in fact, these issues manifest themselves as perfectionism which can also affect one’s ability to write. The unifying thread in these emotional issues that may lead to difficulty with writing or ‘writer’s block’ is the fear the writer has that they are not competent to write a thesis or dissertation; they are an impostor who will be ‘found out’ and unmasked. International students who are unfamiliar with the academic culture of the new institution may have heightened feelings that they will be found not to be ‘qualified’ to embark on their research project or that their English will not be judged good enough.

The impostor syndrome is said to be very common in graduate schools and academia more generally; many apparently successful people struggle with feelings of being an impostor. Paltridge and Woodrow (2012) found that the more mature PhD students in their study who were from professional backgrounds tended to feel more insecure in their ‘new identity as a researcher and as an academic’ (p. 95). Jane, a student in their study, explained how she felt:

My heart was pounding and I felt as though my head going to burst. I looked at everyone and thought to myself that I was in the company of experienced researchers; was my work good enough, would I ‘cut it’ as a researcher? I realise now, although I didn’t know it at the time that I was suffering an acute attack of the dreaded Imposter Syndrome. (Paltridge & Woodrow, 2012, p. 96)
Pauline Clance, a psychologist, has written extensively about the impostor phenomenon and her website has more information on this (https://paulineroseclance.com/impostor_phenomenon.html). In Activity 3.1, we suggest some tips for dealing with these feelings.

**ACTIVITY 3.1 AM I AN ‘IMPOSTOR’?**

**Take the test**

If you sometimes feel that you don’t really ‘deserve’ to be enrolled in a research degree, you can take the impostor phenomenon test online at http://impostortest.nickol.as/ to self assess the extent to which impostor-type feelings may be affecting your thesis writing and sense of yourself as a developing researcher.

**What can I do next?**

You may be surprised to discover that some of the feelings you are experiencing are actually part of the impostor phenomenon. Often simply knowing that these feelings are shared by many people and being able to acknowledge this to oneself or to others can help students feel more confident.

Think about how you might modify the ways you think and talk about yourself to be more confident and positive.

Try talking to fellow students to see if they sometimes have similar feelings. Sharing experiences of these feelings can be helpful.

You can talk online too! Read this blog post by a PhD student discussing her fears as well as the many helpful and supportive comments from fellow students https://pathomson.net/2015/11/05/why-do-i-feelafraid-to-share-my-journal-paper-with-the-wider-world-is-this-impostersyndrome/.

Joining a writing group is a good strategy for meeting people to talk to and improve your writing. (There is more about this strategy in the Social Issues section below.)
The other side of the anxiety coin is the desire to write the ‘perfect’ thesis, which can be just as paralysing, especially when submission draws nearer. Students who tend to perfectionism may struggle with writing in English and experience anxiety about having errors in their writing. They may believe that everyone else writes flawlessly the first time and thus ‘set idealistic and unreachable goals for themselves’ (Badenhorst, 2010, p. 72). Of course, a degree of perfectionism is a good thing. Excessive perfectionism can, however, lead to similar outcomes as the impostor phenomenon as students are never quite ready to share their drafts with supervisors or peers as they ‘just need a little bit more work’ or perhaps a few more papers need to be read first! Both the impostor syndrome and extreme perfectionism can lead to supervisor avoidance which, as we pointed out in Chapter 2, is not a good thing.

Certainly, the emphasis on making an original contribution to knowledge in your PhD (see also Chapter 1) can contribute to feelings of anxiety and inadequacy. Students we talk to are often concerned about failing their PhD; however, research indicates that very few students actually ‘fail’ a PhD (see for e.g., Mullins & Kiley, 2002), it’s more a question of the level of revisions they get asked to do. In fact, fewer than 1% of all theses that are submitted for examination fail (Lovat et al., 2008). Your PhD doesn’t need to be worthy of a Nobel prize. In the words of an experienced examiner interviewed by Mullins and Kiley about how they assess research theses:

A PhD is a stepping stone into a research career. All you need to do is to demonstrate your capacity for independent, critical thinking. That’s all you need to do. A PhD is three years of solid work, not a Nobel Prize. (Mullins & Kiley, 2002, p. 386)

The key message here is ‘get it done’ – do it well but see the PhD as a time-limited
stage in your career development.

The importance of supervisor feedback

Fear of the supervisor’s feedback or fear of the supervisor himself or herself can also have an effect on a student's ability to write. Often this fear is related less to something the supervisor may have done or not done and more to the student's own image of the supervisor as a punishing and judging figure. Unfortunately, fear may lead to avoidance behaviour by the student, thus depriving him or her of a valuable source of improvement.

Opportunities for feedback should be sought out rather than avoided. Tailored supervisor feedback has been found to be a key factor in students’ academic writing development (Odena & Burgess, 2017) (see Figure 3.4). The Iranian doctoral students interviewed by Riazi (1997) reported that their supervisors’ feedback was extremely helpful in their English language development. They saw the supervisor’s comments as a significant resource for improving not only their content and ideas but also their language use and the rhetorical organisation of their writing. Ella, a PhD in Biochemistry graduate, interviewed by Odena and Burgess explained, ‘I needed to learn the specific skills required for scientific writing. One-on-one discussions [with my supervisor] and feedback on documents which I had written was incredibly useful’ (p. 578).

One way of dealing with feelings of being an impostor is to seek out regular feedback on your work. Our advice is to schedule regular meetings with your supervisor (see also our Tips list in Activity 2.6 in Chapter 2) and to ask for written as well as oral feedback. If there are comments you don’t understand, ask for clarification. If audio-recording your meetings while you become accustomed to your supervisor’s accent, intonation, and general speech patterns is helpful, ask them if this would be okay. It may be helpful to adopt Murray’s suggestion that students attach to their draft a cover sheet that outlines:

- date, draft number, word count
- the purpose of what you have written
- the kind of feedback you are seeking on this specific piece of writing
- how you have responded to the previous feedback (based on Murray, 2017, p. 231)

Some of our students have found that while they are able to discuss their topic and
put forward their arguments quite coherently orally, they experience great difficulty with writing. Talking into an audio-recorder or voice recognition software and then editing the transcript has helped several of our students to make progress with their writing. In the section below on social issues, we will talk more about how peer networks and writing groups can help you deal with a possible lack of confidence as well as provide additional sources of feedback on your writing.

**ACTIVITY 3.2 WHAT TYPE OF FEEDBACK DO I PREFER?**

PhD students interviewed by Odena and Burgess (2017, p. 579) described the kinds of feedback that worked best for them. Read their views shown below, and think about what your preferred type of feedback on your writing is. Perhaps you like a mixture of oral and written feedback. Think about how you could communicate your preferences to your supervisor or to friends who may read your work. If you prefer oral feedback, think about how you will make sure you remember it after the meeting.

I like written feedback and track changes, you can visit and revisit it many times

(Barak, 3rd year PhD candidate)

I enjoyed it when my principal supervisor sat down and connected, had an interaction. I found that much more useful than pencil written on a paper

(Jenny, EdD graduate)

Sometimes it’s helpful to talk about it and actually hearing it rather than writing it ... it forces you to think differently about how to say things

(Kate, 4th year PhD candidate)

When we had meetings I would say ‘this is what I want to talk about’ ... I was very self-directed. But I know there are students who are not like that, who need much more structure.

(Tanya, PhD graduate)
ISSUES IN THESIS AND DISSERTATION WRITING IN ENGLISH AS A SECOND LANGUAGE

In this section, we have identified some ways in which feelings and emotions can have an impact on your writing behaviour and suggested some possible strategies for understanding and coping with these issues as they arise. It is also important to understand that there are behavioural changes we can make that can help us deal with anxieties we may experience about writing. The next section discusses behaviours that are related to personal organisation and time management, two elements that Odena and Burgess (2017) found crucial for academic writing development (see Figure 3.4).

**Behavioural issues**

What do we mean when we suggest that behavioural issues can affect your ability to write your thesis? And if this is the case, can you do anything to change your behaviours? Several studies of research students have highlighted the multiple demands on their time. International students in particular may be juggling study, work, and family commitments (both family who are with them and in their home country) (Odena & Burgess, 2017; Paltridge & Woodrow, 2012). In this section we look more closely at issues of time – which crop up regularly in students’ most frequently listed issues and difficulties – and how varying your behaviours might assist you in writing more productively.

**Making writing a habit**

Thesis writers and academics frequently complain about not having enough time to write. They claim that if they only had more time, they would have no problem writing. What we need to do to, however, is to change how we use the time we have. Rowena Murray (2013) argues that we need to think about *making* time rather than *finding* time. Murray, and a number of other scholars who have studied how successful academics write, advocate what she calls brief daily sessions. Brief daily sessions involve writing regularly (ideally, daily), at a specific time and in a specific place and typically for a specific time period. Adopting this approach helps integrate writing into your life, in other words, making it a *behaviour* – something that you do regularly.

Many writers struggle with writing as they erroneously believe writing is a creative and spontaneous act: that they can only write when they are inspired. In fact, as Zerubavel (1999) argues in his highly recommended study of successful writers, writing needs to become a habit.
Paradoxically, through writing regularly, ideally on a daily basis, our inspiration will come as we build a writing routine. Developing a writing schedule that you stick to can play a key role in getting those ‘light bulb’ moments. It can also reduce the likelihood of your thesis writing taking over your whole life as you schedule specific writing times rather than feeling that you need to be writing constantly (which is impossible).

If your current approach to writing is working for you, there’s no need to change. If, however, you are feeling stuck and that your thesis writing is not progressing as you would like, consider trying out what Murray (2013) calls *snacking* – that is regular writing but for defined, shorter periods of time. What causes problems for many writers, according to Murray, is the idea that they can only write if and when they have large chunks of time available for what she calls a writing *binge* – writing for extended periods of time, often in an attempt to meet a deadline, which can become unproductive and exhausting. While complex intricate thinking cannot be done in 15-minute ‘snacks’, she suggests that a combination of larger time slots combined with briefer 30-minute slots may be helpful. Scheduling regular writing times each week as recommended by Zerubavel (see Activity 3.3) has been found by many writers, both academics and novelists, to help productivity.

If you are writing in English as an additional language, writing from early on and writing regularly is most important. The hardest part is generating text and it does take longer if you are putting ideas and language together in new ways. The more time you have for doing this and for redrafting and editing, the more your writing will develop (see Figures 3.1 and 3.2).

In our view, one of the greatest obstacles to students’ writing is the little phrase ‘writing up’ – which leads to students putting off writing until such time as the research is perceived to be ‘done’. You need to see writing as an integral part of the research process and begin to write from early on, whether it be initially through notes and reflections, through logs and diaries or through early drafts of a literature review. This is vital as the skills of writing are acquired developmentally over time and language continues to develop incrementally.
ACTIVITY 3.3 BUILDING WRITING INTO MY LIFE

Based on Zerubavel’s (1999) recommendations, we’ve drawn up a list of key questions to ask yourself as you begin to develop a writing schedule:

1. How much time do I want to spend writing each week (i.e., how many hours per week)?
2. How long do I want each writing session to be?
3. What time of day works best for me for writing (e.g., morning, afternoon, evening)?
4. What is the best place for me to write in?
5. What are my A and B times for writing? A-times are those times of the day when you feel at your writing ‘best’. These should be used for writing and thinking; for generating ideas and text. B-times are when you may be a bit tired; it may be a bit noisy or you may be on a bus or a train but there is still work you can do like checking your references, updating your Table of Contents, or proofreading. Both can be used productively (see also Zerubavel, 1999 for more detail).

Then draw up a writing schedule based on your answers to these questions

Use your calendar to map out your writing days and times. Alternatively, download and print (on A3 paper if you can), the year-long calendar available here https://student.unsw.edu.au/sites/all/files/uploads/group40/2019_A4.pdf. Fill in all your major deadlines and activities for the year and keep it updated. Then look at where you can schedule your writing times to help you meet your writing deadlines. At this stage, switch to a weekly planner: you can download a weekly one at this link, https://student.unsw.edu.au/sites/all/files/uploads/group40/A4_Weekly.pdf and you will also find an editable Word version there. Your schedule may differ from week to week. What’s important is that you identify dedicated weekly writing time in your calendar and don’t let other activities eat into this time. Zerubavel (1999) advises writing frequently and regularly so as not to lose your momentum. It will become easier over time to do this and stick to it as you experience the benefits.
ISSUES IN THESIS AND DISSERTATION WRITING IN ENGLISH AS A SECOND LANGUAGE

Excerpted from *Thesis and Dissertation Writing in a Second Language*

**Writing as a process**

As we mentioned above, one of the impediments to writing can be the idea of delaying writing until a few months before the thesis is due and then sitting down to ‘write it up’. As should be clear by now, we strongly believe that you should be writing from the outset and using writing throughout the time of your thesis to work out what you are thinking and understanding. Scheduling regular writing can help prevent last-minute writing to unrealistic deadlines. Writing is a process of constant revision and refinement that helps us clarify our thoughts. If we leave this to near the end, we lose the important time needed for revision and redrafting. Ideally, we like to see at least two full drafts of each chapter our students write and then at least two full drafts of the final thesis before submission or the viva. Figures 3.1 and 3.2 illustrate the amount and extent of revision that experienced and successful writers undertake before getting to the final draft.

![Diagram of the writing process](image)

*Figure 3.1 A simplified model of the writing process (Atkinson & Curtis, 1998, p. 15).*
Figure 3.1 shows how early studies of the processes writers go through as they write conceptualised writing as a process involving prewriting or planning, drafting, getting feedback, revising, and then editing before ‘submitting’. These studies helped shift our understanding of writing from simply being about coming up with an idea or a plan and sitting down to write without taking time to seek feedback and revise in terms of the feedback. However, more recent research has demonstrated the even greater complexity of the processes we engage in when writing (see Figure 3.2), highlighting the non-linear nature of writing and the multiple iterations involved. The usefulness of this research for second language thesis writers is that it helps break a highly complex set of processes into a series of simpler stages or sub-tasks which enable you to ‘get started’ and have a sense of accomplishment as these smaller tasks are completed. The diagram illustrates the key role of feedback and the importance of revising and shows that there will be times at which you may need to redraft (go back closer to the beginning) rather than simply revise. Extensive drafting and feedback should also effectively reduce potential plagiarism as you will be receiving feedback on a continuous basis.
ISSUES IN THESIS AND DISSERTATION WRITING IN ENGLISH AS A SECOND LANGUAGE

Excerpted from *Thesis and Dissertation Writing in a Second Language*

Academic writing at an advanced level is therefore more than ‘just getting ideas down on paper’ and being sure that they are in ‘good English’ (Atkinson & Curtis, 1998, p. 17). What research student writers need to grasp is that there is a reciprocal relationship between thinking and writing (see Figure 3.3). Writing is an essential means of clarifying our thoughts which is why delaying writing can become an obstacle to the development of understanding and why, conversely, regular writing facilitates the development of understanding of a topic.

**Generating text**

Biggs et al. (1999) point out that second language writers may be spending proportionately too much of their time on what they call the mechanics of Writing – on sentence, grammar, and word-level features – rather than on generating meaning at a higher level and then organising it into sentences and finding the appropriate words. The overarching themes of the writing may then be lost and unsupported and sections of text become irrelevant even though well written at a sentence level. They encourage students to generate text and revise and edit it later which may reduce blocking.

Murray (2017) recommends a very useful strategy for encouraging thesis writers to generate text, particularly in the early stages of the PhD. She suggests that the following set of prompts can help students write about the context of their topic. The prompts can be used repeatedly as your focus develops or alters.

---

*Figure 3.3 The reciprocal relationship of writing and thinking (Huff, 1999, p. 7).*
ISSUES IN THESIS AND DISSERTATION WRITING IN ENGLISH AS A SECOND LANGUAGE

The text that you generate through using the prompts can be expanded by you, revised, and edited. By writing these 325 words, you will have begun to write your thesis!

What can I write about? The context/background to my research

My research question is .... (50 words)

Researchers who have looked at this subject are .... (50 words)

They argue that .... (25 words)

Smith argues that .... (25 words)

Brown argues that .... (25 words)

Debate centres on the issue of .... (25 words)

There is still work to be done on .... (25 words)

My research is closest to that of X in that .... (50 words)

My contribution will be .... (50 words)

(Murray, 2017, pp. 118–119)

Rhetorical issues

Rhetoric is the art of persuasion and has its origins in ancient Greece with philosophers like Aristotle who was skilled at persuading his listeners to accept and believe in his arguments. When we talk about rhetorical issues facing thesis writers today, we are referring to the importance of thinking about who is reading your thesis and how you are going to develop an argument in your thesis to persuade your reader(s) that your research is valid, interesting, and makes a contribution to your disciplinary area. A completed thesis or dissertation is never simply a description of what you read and what you did, it is a sustained argument developed over the entire thesis, supported by evidence, usually from your study, and supported by what you’ve read, in which you attempt to persuade the reader – your supervisor and the examiners – of the validity of the claims you are making and of the arguments you are putting forward.

For many students, writing a thesis or dissertation will be the first time they have had to consider rhetorical issues of this nature while managing and structuring such a large amount of text. Writing a thesis or a dissertation can be a
most formidable task for many graduate students. [...] not only because of the daunting size of the document but also because of the high standard to which the thesis/dissertation is held. The writing challenge is not only demonstrating knowledge related to the research but also using that knowledge to ‘argue logically and meaningfully the meaning of the research results’.

(Dong, 1998, p. 369. Our emphasis)

Biggs et al. (1999) and Torrance and Thomas (1994) found that all writers benefit from explicit instruction on how to structure a thesis and its constituent parts. These findings are supported by extensive research into academic writing that emphasises the importance of explicit teaching of the structure of specific written genres, particularly to writers for whom English is a second language.

Much supervisor knowledge of writing is tacit, however, and, although supervisors recognise ‘good writing’, they often find difficulty in explaining to their students how to produce it. One of the main aims of this book is to help research students develop a more explicit understanding of how theses and dissertations are structured and organised in English.

**Becoming a responsible writer**

As Tardy (2005) points out, the advanced academic literacy needed by research students requires not only linguistic ability but ‘rhetorical insight’ into their ‘disciplinary community’s ways of building and disseminating information’ (p. 326). An integral part of successful thesis writing is understanding the expectations of your *audience*, that is your readers. And their expectations are shaped by the discipline they are part of and its history of what makes a particular text successful.

Dunleavy (2003) underlines the importance for the thesis writer of managing reader expectations and always writing with the reader in mind. Students from a range of linguistic backgrounds may experience difficulty with the degree of explicit guidance to the reader that characterises academic English prose. English (and some other languages of Germanic origin) have been described as ‘writer responsible’ in that ‘English speakers, by and large, charge the writer, or speaker, with the responsibility to make clear and well-organized statements’ (Hinds, 1987, p. 143). In contrast, writers of languages which tend to be more ‘reader responsible’, such as French or Polish, or a number of Asian languages, may perceive the
direction, signalling, and signposting to the reader required in a lengthy thesis
insulting to the intelligence of their reader as they imagine him or her. We find that
for our students the notion of writer responsibility can be very helpful in the
structuring of their writing (see also Chapter 1). Nuria, a doctoral student from
Latin America studying in the UK found it difficult at first to adapt to the more
writer responsible expectations of academic English:

In Latin America it's a little more descriptive, so here you have to be very
accurate with every sentence you use, be very short, but in Latin America we
use very long sentences, we go around an idea. The first year it was very
difficult for me to understand what was the level required.... It took me a lot
of reading, a lot of feedback, long sessions of supervision, long sessions of
reviewing my own writing to understand what was expected from me.

(Nuria, 3rd year doctoral student, cited in Odena & Burgess, 2017, p. 584)

It’s hard to know how long a sentence or for that matter a paragraph should be. In
general, it seems that academic English favours a shorter sentence than the more
reader responsible languages we discussed earlier in this chapter. Hartley and
Cabanac (2016) provide what they call three simple rules for making academic text
easier to read:

• Rule 1: if a paragraph is too long split it in two.
• Rule 2: long sentences can be split into two (or more) ....
• Rule 3: examine each sentence, in turn, to see if you can delete two (or more)
words from each one.

You should only follow their advice when editing your work, not while drafting as it
will slow you down too much. However, their method can be a helpful editing tool.
Before trying it out, have a look at the examples of sentences and paragraphs
they’ve edited at this link:

https://doctoralwriting.wordpress.com/?s=long+sentences&search=Go.

A key way in which writers acknowledge their responsibility is through their use of
metadiscourse which can be described as the writer's overt acknowledgment of the
reader (Dahl, 2004). Metadiscourse primarily plays the role of organising the text
for the reader and is used by the writer to interact with the reader about the
content of the text.
ISSUES IN THESIS AND DISSERTATION WRITING IN ENGLISH AS A SECOND LANGUAGE

Second language writers need to be become familiar with how metadiscourse operates in academic English, specifically the ways in which the lengthy text of the thesis needs previews, reviews, and overviews to assist the reader make sense of the structure and arguments. The following extract illustrates the way in which the writer of a PhD thesis on environmental policy begins Chapter 2 of his thesis with a brief overview, providing useful signposting for the reader as to the scope of the chapter:

This chapter reviews empirical evidence of the distributional impact of environmental policies. The scope of the review is on policies that aim to reduce environmental problems related to energy consumption. These include, for example, emission of greenhouse gas and pollution from vehicle fuel use. Carbon taxes or energy taxes are the principal policy that is examined.

(Yusuf, 2007, p. 12)

The concept of metadiscourse is discussed at greater length in subsequent chapters and illustrated in many of the annotated examples in later chapters of this book (see also Chapter 1). Johnston’s findings from her study of 51 examiners reports of doctoral theses provide further evidence of the expectations the reader/examiner of the thesis has and the importance of signposting in the thesis. Some of her key findings are summarised below:

• Examiners approach reading a thesis with an air of expectation and even enthusiasm, but this disappears if the thesis is not reader friendly.

• General impression and overall presentation of the thesis seems particularly important to the examiners.

• The reader needs to be assisted through the use of summaries, logical sequencing, signposts, and the removal of excessive repetition.

• All readers require assistance to understand the work; they feel distracted and irritated by poorly presented work; they appreciate well-written, interesting, and logically presented arguments (Johnston, 1997, p. 340).

Relatedly, the second language students studied by Shaw (1991) struggled with the notion of audience – for whom were they writing their thesis? What was the image of the reader they had in mind as they wrote? Whereas undergraduate students clearly know they are writing to be assessed and therefore need to display their
knowledge of the topic, regardless of the fact that the marker will know all about the topic, the thesis writer has a more complex relationship to his or her audience, in effect caught between 'knowledge-display and information transmission' (Shaw, 1991, p. 193). In fact, the real and most immediate readers (or audience) of the thesis will be the supervisor and the external examiners who will already know much about the topic. Thesis writers then have, to some extent, to display their knowledge of the field, though in a more sophisticated and elaborated way than an undergraduate. They are not simply communicating as one expert to another or communicating with a non-specialist with some background knowledge but are writing to persuade an expert that they are worthy to join a community of scholars (see also Chapter 1).

This potential role confusion can impact on a thesis writer’s sense of identity as they straddle the border between being a student and being a peer. If you are simultaneously writing journal articles for publication and your thesis, you will need to adopt a more ‘expert’ sounding voice in the journal articles, whereas in the thesis you may need to ‘sound’ more like a student, albeit a ‘sophisticated’ one. How to sound both authoritative and deferent is a challenge, more especially in a language that is not your first language. It is very important that you think about who your audience and readers are both in terms of writer responsibility and the specific rhetorical (persuasive) aims of your thesis.

Furthermore, thesis writers need to understand that they will be evaluated by their readers (examiners) in their own terms – in terms of the claims they make in their argument. Mullins and Kiley (2002) found that experienced examiners are careful to check for links between the introduction in which students state their intentions and the conclusion ‘where the intentions should have been realised’ (p. 385).

Moderating one’s claims becomes very important; you should neither ‘boost’ your claims too strongly or overgeneralise nor should you fail to make them with the appropriate force to convince the reader of the value of the claim being made. This is where the linguistic resources known as ‘hedges’ become extremely important to second language thesis writers as they learn how to adjust the strength of their claims in relation to their audience and communicative purpose. Hedging is discussed in more detail in Chapters 9 and 10.

In her study of a second language master’s student’s development as a successful thesis writer, Tardy (2005) shows how Paul (the student) revised his text as he became more aware of the need to explicitly persuade his reader of the logic of his
argument. She quotes him as saying:

one thing I learned from this is when I wrote something quite long, I must make it clear that what I try to express is interesting to readers. I cannot just put lots of experimental results in my writing without explaining what’s the importance of this result and why we should care about this experiment.

(Tardy, 2005, p. 332. Emphasis in original)

**Fine-tuning' your academic language**

Flowerdew (1999) noted that Hong Kong Chinese scholars attempting to publish in English experienced difficulty in a number of areas. These included the length of time it took them to write in English; expressing their ideas in English; the extent and richness of their vocabulary and making claims for their research that had the requisite degree of force. They felt that their language skills limited them to a simple style of writing; they perceived writing qualitative research to be more challenging than quantitative research and found writing the introductions and discussion sections of research articles to be particularly difficult. While Flowerdew interviewed academics who had completed a doctorate and who were writing for publication, the issues he examines are equally pertinent for non-native speakers of English who are writing a doctoral or master's thesis.

In Shaw's (1991, pp. 195–196) study, the students reported that using semi-technical vocabulary and finding the right word for the context were their areas of greatest difficulty. However, he found that many of the students had developed a strategy of extensive reading in their subject area followed by note-making of useful terms that they could use in their own writing. Phrases such as ‘the foregoing indicates’, ‘highlighted the fact that’, and ‘such tests are still useful but it is now recognised that...’ would be noted down and reused. One of the Russian students interviewed by Angelova and Riazantseva (1999) made lists of words and phrases that she could use to introduce topics, build arguments, agree or disagree with a position, and close a discussion. This strategy helped her when she felt unable to write.

When you are reading, you should try to read not only for content but to also pay attention to the ways expert writers of books and articles structure their texts in the way Shaw's students did. This can help you expand your linguistic resources. A number of writing specialists recommend what has been called a 'language re-use'
strategy (Flowerdew & Li, 2007). Let us be very clear, we are not in any way suggesting that students plagiarise the words of others; what is, however, being suggested is that there are many commonly used words and phrases in academic English that can be reutilised both across and within disciplines, independently of specific content. These are the types of words and phrases that can be found, for example, in the online Academic Phrasebank (see below). It should be noted that these are usually fairly short phrases of not more than about five to six words.

Our students find the Academic Phrasebank www.phrasebank.manchester.ac.uk/ referred to in Chapter 1 extremely helpful. This site contains a large searchable database of the ‘building blocks’ of academic language gathered from published research articles and doctoral dissertations. Like this book, the Phrasebank is organised around common organisational patterns found in journal articles and theses and dissertations: introducing your work, referring to sources, describing methods, reporting results, discussing findings, and writing the conclusion. Clicking on these headings will take you to lists of generic examples of how to express these patterns in English. All the disciplinary or subject content has been removed so you cannot be said to have plagiarised if you use these language patterns to build and develop your academic writing.

Down the left-hand side of the website is a list of commonly used academic language functions such as explaining causality, being cautious, being critical, and so forth. If, for example, you were keen to expand your linguistic resources for using metadiscourse and signposting your thesis (see above), you could click on the link to signalling transition where you will find hundreds of examples of different phrases to help your readers make sense of your text that you can try out.

An Indonesian student, Danu, who was struggling with writing more critically in his literature review, found the being critical section of the Academic Phrasebank extremely helpful. A comparison of the two short extracts below from his draft review illustrates how he strengthened his critical voice through integrating language from the Academic Phrasebank:

Danu’s initial version:

However, a closer look at the study shows that some items which are supposed to measure reading enjoyment such as “Reading is boring” and “Reading is a waste of time” were categorized into reading anxiety. (…) (Emphasis in original)
Revised version:

One question that needs to be asked, however, is why some items which are supposed to measure reading enjoyment such as “Reading is boring” and “Reading is a waste of time” were clustered into reading anxiety. A serious weakness with the clustering of the items is that... Another major drawback of this study is...

(Emphasis added).

(Cited in Mochizuki, 2019. Expressions in bold from Academic Phrasebank)

A related strategy is the ‘sentence skeleton’ or template recommended by Swales and Feak (2012), Cargill and O’Connor (2009) and Thomson and Kamler (2016). The idea behind the sentence skeleton is that you ‘strip’ the flesh (i.e., the content) off the bones of the paragraph that you would like to use as a model for your writing and you are left with a skeleton that you can use to build your own paragraph, using your own disciplinary content. On her blog, Patter, Pat Thomson provides some examples of paragraph skeletons she’s developed: https://patthomson.net/2011/07/11/writing-skeletons/.

One straightforward way of checking if these phrases and expressions are used in your field and how they are used is to use Google Scholar to look or examples of common usage. It can also help you build your academic vocabulary. Swales and Feak (2012) provide instructions on how to use Google Scholar to search for examples of commonly used words and how they are typically used in contexts with other words such as prepositions and adjectives. So, if, for example, a search of the commonly used phrase “recent research has...” (you must use double quotation marks) finds over half a million examples and shows that verbs such as witnessed, led to, revealed, been carried out, investigated, has mainly focussed on, established, and so on have all been used, you can see which ones work best in your sentences and paragraphs. Chen and Flowerdew (2018) report on a Computer Science PhD student from Hong Kong who found using this Google Scholar strategy very helpful when writing for publication.

Using features of your word-processing program such as an online thesaurus can also help build your vocabulary. The online Academic Word list www.victoria.ac.nz/lals/resources/academicwordlist/publications/AWLmostfreqsublists.pdf contains the 570 most frequently used academic word families (the word family for ‘analyse’ – the most commonly used academic word – consists of 15 variants of ‘analyse’ with ‘analysis’ being the most frequently used). By the time you start writing your thesis, you should at least be familiar with all the word families on the list.
ACTIVITY 3.4 BECOMING A MORE RESPONSIBLE WRITER

Think about where your first language might sit on the reader responsible writer responsible continuum below. What could the implications be for your thesis writing in English?

Based on what you’ve read in this chapter, on your experience of reading academic texts in English and any feedback you’ve had on your writing, are there aspects of your writing style you may want to fine-tune?

Have a look at three recent theses in your field. Ask yourself:
- Are they ‘reader friendly’? If so, what features make them so?
- What kinds of signposting do the authors use? Look at headings and sub-headings but also at beginnings and ends of chapters.
- Can you get a good idea of the structure and organisation of the thesis from the Table of Contents?
- Check for the links between what the authors say they will do in the Introduction and the extent to which in the Conclusion they show how they have done this. Also check the Research Questions and how each one is addressed in the Discussion and Conclusion sections of the thesis.
- Is it clear to you what the ‘knowledge contribution’ of each thesis is? Could you write it down in one or two sentences?

If you want to find out more about what thesis readers (examiners) expect, Clinton Golding (2017) has written a helpful article based on the research into what examiners look for in a thesis. His advice is available in open access here: www.tandfonline.com/doi/pdf/10.1080/23265507.2017.1300862?needAccess=true

You can also read Sue Starfield’s blogpost on this same topic here: https://doctoralwriting.wordpress.com/2015/06/10/from-finish-tostart-writing-your-thesis-with-the-end-in-view/
Writing with authority and developing your ‘voice’

Morena, a PhD student studying in New Zealand, described her feelings at the beginning of her research:

I don’t feel I am in a position to critique anything, I agree with almost everything I read ... and even when I can’t make sense of what I’m reading my first reaction is always to think that the problem lies in me – the reader – not having the necessary knowledge to comprehend a complex idea.

(Botelho de Magalhães et al., 2019)

This sense of lacking the authority to critically evaluate the work of others is not uncommon. We’ve already alluded to the complexities surrounding how authoritative to sound in your thesis when we discussed becoming a responsible writer; further compounding the issue, is finding the appropriate ‘voice’ in English. Many of the international students who enroll in postgraduate study are already successful writers in their first language and have established a strong sense of self as a writer in this language or, in fact, in several languages (Hirvela & Belcher, 2001). However, limited linguistic resources can mean that writing a thesis in English and ‘sounding like’ the sort of person they would like to sound like can become frustrating. Thesis writers who are established professionals or academics in their home country can experience ‘extreme difficulty [...] making the transition from holding a position of professional respect in the native country to the anonymous and relatively powerless life of a graduate student in the new country’ (Hirvela & Belcher, 2001, p. 99). Finding an appropriate academic ‘voice’ can also prove difficult for students from politically repressive regimes who may have difficulty expressing critical perspectives or their own opinion which are standard expectations of Western Anglophone universities (Angelova & Riazantseva, 1999). More generally, research has shown that ‘finding your voice’ is a key factor in academic writing development at an advanced level (see also Figure 3.4).

Shen (1989), who moved from China to study in North America, insightfully captures the extent of the conflict a student may experience as he or she struggles to find an academic English ‘voice’ and the implications for their sense of self. He eventually arrived at an innovative resolution of his sense of having to become a different person when writing in English:

First I made a list of (simplified) features about writing associated with my old identity (the Chinese Self), [...] and then beside the first list I added a column of features about writing associated with my new identity (the English Self). After that
I pictured myself getting out of my old identity, the timid, humble, modest Chinese “I” and creeping into my new identity (often in the form of a new skin or a mask), the confident, assertive, and aggressive English “I.”

(Shen, 1989, p. 462)

Similarly, Diego whose first language is Spanish, describes his journey to develop a stronger ‘critical’ voice: ‘My supervisor kept pointing out that I needed to be critical because I was being very expository, that took me some time to understand because I felt that I was no one to be critical of others’ works’ (cited in Botelho de Magalhães et al., 2019, p. 10. In Diego’s account of his progress towards being more critical he moved from ‘producing a descriptive summary of other researchers’ ideas to ‘mimicking’ the ways ‘well-established authors adopt a critical perspective’. His supervisor suggested he stop using verbatim quotes which simply reproduced the voices of other writers and paraphrase instead. He found that in these early stages he was using ‘stated’ as his main reporting verb which led to summaries of other writers’ views without evaluation. It took him almost three years and a lot of reading to develop a more critical approach to the literature:

When I began to read the literature, I tended to agree with everything because everything made sense at first sight. Since I had not adopted a position, most ideas seemed fine to me … it was only when I found a theoretical framework that I could identify with, that I was able to critical views of others’ works.

(Diego, cited in Botelho de Magalhães et al., 2019, p. 10)

To develop a more critical voice, Diego adopted the strategy of using ‘concessive’ clauses introduced by phrases such as ‘although’ or ‘even though’ and conjunctions such as ‘yet’ and ‘however’ which he felt allowed him to ‘respectfully acknowledge’ the cited writer’s ideas before he expressed his own view.

Varying your citation patterns can help make your writing sound more authoritative. If you begin each sentence or paragraph of your literature review with the name of one of the authors you are reviewing, you are giving up some of your ‘voice’ to theirs. Rudestam and Newton (2007) suggest several quite simple but not immediately obvious ways in which the literature review can begin to sound more like your ‘take’ on the topic so that your own ‘voice’ begins to emerge:

- Try to avoid beginning your sentences with ‘Jones said …’ ‘Smith found …’ – this shifts the focus of your reviews from your own argument to the work of others.
• Try to ‘develop a theme and then cite work of relevant authors’ (p. 65) to support your arguments or to provide examples or counter-examples of your point.

• Try to limit excessive quoting. This can also lessen your authority and control.

• Try to avoid reporting everything. Be selective – ‘build an argument not a library’ (p. 66).

**Using the first person**

We are often asked by our students about whether they can use the first person singular pronoun ‘I’ in their thesis writing. These are students in education, the social sciences, and the humanities. It seems to still be the case that the sciences, medicine, and engineering generally avoid the first person. How do you make a decision about when and whether to use ‘I’ in writing your thesis? There is certainly no consensus on this and the decision you will make will typically be shaped by the research paradigm you have adopted, conventions in your discipline, and the type of research you are doing. However, things are changing and you should definitely discuss options with your supervisor and take note, when reading journal articles and recent theses in your field, of whether they are using ‘I’ and how they are using it (see also Chapter 1).

In a study of thesis introductions in History and Sociology PhDs, Starfield and Ravelli (2006) argued that ‘I’ was used to convey different meanings at different places in the introduction, depending on the writer’s purpose. They identified five different uses of ‘I’ in the 20 introductions they examined:

• / as guide or architect – to structure the discourse and state a purpose

• methodological /– explains what the researcher did/considered doing int he research process

• / as opinion holder – I think/believe/assume

• / as originator – author as ‘claim maker’

• Reflexive /

‘I’ as guide or architect was seen as the least authoritative use, with ‘I’ being used to guide the reader through the text in phrases such as ‘I want to explore’ and ‘I want to investigate’. Methodological / is similar in that the first person serves to order the account of the research process: for example, ‘A small number of interviewees insisted on confidentiality, and I have taken such ethical considerations into account in how I have utilised the interview material throughout the thesis’ (p. 232).
I as opinion holder and I as originator sound more authoritative as the writers express opinions and make claims:

- ‘But it is also related, I think, to deeper, long-held assumptions about the relationship between work and modernisation that have informed the sociological imagination’ (‘I’ as opinion holder) (p. 232).

- ‘I argue that Foucault’s rigorous critique of the repressive hypothesis can be read as a comprehensive account of power’s complex ontology’ (‘I’ as originator (p. 233) (Starfield & Ravelli, 2006).

What Starfield and Ravelli (2006) called Reflexive I was found in some of the theses where the writers explicitly positioned themselves as a researcher in their study and reflected on their role, giving themselves a strong personal ‘voice’. This is probably the most ‘tricky’ use of ‘I’ but is becoming an accepted part of qualitative research writing and is used in the example below:

The writing of this thesis was a process that I could not explore with the positivistic detachment of the classical sociologist. After all I was affected by the repression, the exile and the mutations within Chilean society as much as anyone else in the country. (p. 234)

While the examples shown here are from history and sociology theses, the first person is being used in some science theses too. For example, in her study of bats living in urban areas, Caragh Threlfall (2011) made extensive use of the first person in her introduction, using mainly I as guide and methodological I:

The aim of this thesis is to help fill this knowledge gap. I firstly establish a trait-based response of the bat community, where biogeographical factors including landscape productivity, the level of urbanisation and habitat loss are used to explore the overall bat response and community structure. I then explore these mechanisms using mensurative and manipulative studies at a landscape and local scale .... In this way, I have used a combination of approaches which are typically used in isolation ....
ACTIVITY 3.5 CAN I USE THE FIRST PERSON?

Read the two quotes below from students Lina and Diego and think about what your preference is for how you will talk about yourself in your thesis (once you’ve read the section on writer voice, of course!).

I always used “one” instead of you or I, before the course, I thought that was expected of me. I didn’t know that you had options available.

(Lina Ru, Master’s student in the Humanities, UG engineering degree, cited in Badenhorst et al., 2015, p. 7)

I prefer to use ’I argue that...’ and ’I maintain that ...’ However, I was encouraged to avoid the use of ’I’ by one of my assessors who comes from a quantitative paradigm ... I managed without it in my dissertation. .... I did feel constrained as I was unable to express certain ideas more comfortably using ‘I’ which I strongly see as part of the language of qualitative research.

(Diego, PhD student, cited in Botelho de Magalhaes et al., 2019 p. 10)

Social issues

The solitary nature of writing a thesis and its potential for isolation is well-known. International students may be particularly vulnerable in this regard, particularly if their isolation affects their ability to receive and benefit from feedback during the process of writing. Shaw (1991, p. 193) found that the second language thesis writers he interviewed were not making use of ‘feedback from colleagues as a resource in the writing process’, either for revising or for editing. While, as we have emphasised throughout this chapter, your relationship with your supervisor is very important to successfully completing your thesis, there is growing recognition of the important role that peer support can play in supporting master’s and doctoral students’ learning (see also Figure 3.4).

Research indicates that peer support groups and group feedback may indeed help not only with combating potential isolation but also assist writing development (Aitchison & Guerin, 2014). Peer support can take a variety of forms, from regular email interactions that help to counter the effects of the impostor syndrome (Watson & Betts, 2010) to monthly face-to-face meetings supplemented by email and phone calls (Devenish et al., 2009). Devenish et al. found that ‘collaborative
peer support has been one of the most valuable enablers to [their] progress’ (p. 61). Certainly, public discussion of writing and anxiety associated with writing has been found to reduce students' sense of isolation and inadequacy.

Thesis writing groups are becoming increasingly popular as students experience the benefits of both giving and receiving peer feedback. The graduate office or writing centre at your university may well be offering thesis writing groups. Groups typically consist of a small number of students who meet over several weeks for a couple of hours with a facilitator and read extracts of each other’s writing and provide feedback in the course of the group meeting. Studies show that students find talking about writing, giving, and receiving feedback as well as the social connection with others to be very beneficial (see for e.g., Aitchison & Guerin, 2014; Mochizuki, 2019).

In a study of 45 doctoral students, Caffarella and Barnett (2000) found that preparing critiques for their peers and receiving critiques from professors and peers were the most significant elements in helping them to understand the processes of scholarly writing and in improving their academic writing. They conclude that although the processes of learning to give and receive feedback may be stressful, the frustrations are outweighed by the benefits derived from participating in a sustained writing development program which incorporates instruction on how to provide explicit feedback in conjunction with receiving feedback from Faculty members and fellow students.

Your university may also offer thesis writing courses or workshops. We strongly recommend that you attend such courses. In addition to providing useful information about thesis writing, these programs give you an opportunity to meet students from differing disciplines or schools and talk about your research and writing. The social dimension provided by this type of instruction can be almost as important as the writing instruction.

In addition to writing groups and writing courses, many universities are now running regular writing boot camps (Starfield & Aitchison, 2015). These are typically a weekend event facilitated by writing specialists in which large numbers of students at various stages of writing their thesis come together and sit and write for two or three days. Perhaps surprisingly, students report that the bootcamp experience facilitates writing and they repeatedly sign up for future bootcamps. It may be the absence of distraction and the presence of others focussed on writing that encourages everyone to be productive.
ISSUES IN THESIS AND DISSERTATION WRITING IN ENGLISH AS A SECOND LANGUAGE

Other socially oriented writing events like *Shut up and Write!* are also popular on many university campuses. *Shut up and Write!* draws on the Pomodoro technique (www.lifehacker.com.au/2014/07/productivity-101-a-primer-to-the-pomodoro-technique/) to encourage regular, timed ‘snack’ writing; the idea is make writing manageable and become more productive. A good way to run a *Shut Up and Write!* group in your School or Department is to meet once a week in a café, with your laptops, and write for 25 minutes, then take a 10-minute break, have a coffee and chat and then write for another 25 minutes before going on your way. You will be surprised how productive you can be (Mewburn et al., 2014).

Starfield and Aitchison (2015) list five benefits of joining research writing events with others:

- Increased productivity – without a doubt, you’ll write more!
- Collegiality – meet new people, have fun, and remove the angst and agony of writing alone.
- Establish local and international networks that can last for years.
- Learn about yourself as a writer – understand how to beat procrastination and push through even the toughest patch.
- Learn writing know-how – take advantage of a wealth of resources and support through linking into associated social media supports.

The types of peer writing activities described above may be available on your campus: don’t be afraid to try them out. There is a great deal of support in the virtual world too. We provide information on some of these resources in Chapter 13. As we have argued in this chapter and in Chapter 2, being connected to others is important for successful thesis writing.

Conclusion

This chapter has examined four key issues which can affect the ability of second language writers to successfully complete a thesis. Figure 3.4 provides an overview of key factors identified in this chapter and in academic writing more generally. Not all may appear immediately relevant to writing but there is now a significant body of research, some of it reported on in this chapter, that indicates that emotional, behavioural, and social issues as well as issues of identity in a new
language and culture can substantially influence a student’s capacity to engage in and sustain writing over a lengthy period. Moreover, expectations about the relationship between writers and readers may vary across languages and cultures and may need to be explicitly discussed. It is important that you are aware of the potential for these issues to impact on the production of your thesis.

![Diagram of Key Factors in Academic Writing Development](image-url)

*Figure 3.4 Key factors in academic writing development (adapted from Odena & Burgess, 2017, p. 577).*