GENERAL GUIDELINES FOR THE PREPARATION OF A MSc TREATISE

Compiled by Prof C H Klopper
Revised by Prof C E Cloete

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GENERAL

1. The aim with a treatise is to give a student an opportunity to demonstrate his/her ability to:

   1.1 do independent research;

   1.2 use scientific research methods in a scientific investigation; and

   1.3 communicate in writing according to scientific standards and requirements

2. In the treatise a student is required to undertake empirical research of limited scope which may be of a qualitative or quantitative nature

3. Certain requirements pertaining to scientific research will be relaxed or dispensed with in the case of a treatise. In contrast to a thesis, a treatise does not have to make an original contribution to the knowledge or insight of an area of science and does not need to indicate exceptional depth, while the actuality of a treatise topic is not of great importance.

4. The following is not acceptable as a treatise:

   4.1 The mere writing down of theory from the existing literature

   4.2 The mere reporting of a case study

   4.3 Purely descriptive work of any kind, for example of systems, policy, strategy or any aspect along those lines

5. A treatise is acceptable and can be passed (awarded 50% +) if it indicates that the candidate:

   5.1 is familiar with the nature and aim of the investigation;
5.2 shows satisfactory knowledge of the relevant literature and can interpret what is read;

5.3 has mastered the techniques being used in the investigation;

5.4 has a sound theoretical basis of, and knows how to apply scientific methods;

5.5 is able to evaluate findings and to formulate, synthesize and communicate in a scientific manner the insights gained;

5.6 can structure the research report in a scientifically substantiated manner

List of sources consulted

University of Pretoria: Graduate School of Management: *External examiners: Guidelines for the examination of a script*

PREPARING THE RESEARCH REPORT

1 THE PARTS OF THE TREATISE

The treatise is a document describing the state of a specific problem, the method selected to solve that problem, and the results of the research. It comprises the preliminaries, the corpus and annexures.

These parts are composed as follows:

<table>
<thead>
<tr>
<th><strong>Preliminaries</strong></th>
<th>front cover and spine</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>title page</td>
</tr>
<tr>
<td></td>
<td>declaration</td>
</tr>
<tr>
<td></td>
<td>acknowledgements (optional)</td>
</tr>
<tr>
<td></td>
<td>abstract</td>
</tr>
<tr>
<td></td>
<td>table of contents</td>
</tr>
<tr>
<td></td>
<td>list of figures</td>
</tr>
<tr>
<td></td>
<td>list of tables</td>
</tr>
<tr>
<td></td>
<td>list of abbreviations</td>
</tr>
<tr>
<td><strong>Corpus</strong></td>
<td>main text</td>
</tr>
<tr>
<td></td>
<td>list of sources consulted</td>
</tr>
<tr>
<td><strong>Annexures</strong></td>
<td>section of supplementary information</td>
</tr>
</tbody>
</table>

Not every treatise includes all these components, but if included, they should be arranged in the indicated sequence.

1.1 Preliminaries

The preliminaries are the part preceding the main text. It consists of the following, in the order given:

- front cover and spine
• title page
• declaration
• acknowledgements
• abstract
• table of contents
• list of figures
• list of tables
• list of abbreviations

1.1.1 Front cover and spine

The outside front cover with the title introduces the treatise to the reader. It must therefore appear professional, distinctive and informative.

The following information should appear on the outside front cover:

• Title, as indicated on the title page.
• Full name of author, as indicated on the title page (or, if space is limited, at least initials and surname)
• Date (year only)

The information on the outside front cover should in no way conflict with the information given on the title page.

If the spine of the treatise is thick enough to carry information, it should give the name of the author and the title, abbreviated if necessary. This information is printed either horizontally or from top to bottom, but never from the bottom to the top.

1.1.1.1 Title of the treatise

The title is a very brief abstract of the contents of the treatise. It describes the subject and therefore identifies the reader audience.
The wording of the title is important for descriptive as well as for information retrieval purposes as the key concepts in the title are also used for compiling the entry in indexing and abstracting journals.

The title has to be

- explicit and indicative of the subject
- concise: eight words or less are normally sufficient;
- longer titles are cumbersome and difficult to include on the spine (see 1.1)

Do not

- use a subtitle, it hardly ever adds any meaning
- start the title with an article (the, a, an)

1.1.1.2 Name of author

The author is the person who undertook the research and is compiling the treatise and the name must be presented in full.

To facilitate information retrieval, the author is encouraged to elect only one version of his or her name, and to use it consistently for all publications.

1.1.2 Title page

The title page should give, in the order shown, the following information:

- title of the treatise
- full name of the author
- name(s) of study leader(s)
- date submitted (month and year)
An example of a typical title page is appended (Annexure 3)

1.1.3 Declaration

A declaration that the treatise is the work of the student and that all sources have been acknowledged and listed should be inserted (see Annexure 10)

1.1.4 Acknowledgements

Although the research for a treatise is the sole responsibility of the candidate, some assistance is sometimes received. This can be acknowledged, but advice or minor assistance received is not

List acknowledgements as a separate section, if many, preferably on a separate page

The use of published tables or illustrations requires permission from the publisher and acknowledgement of copyright

Acknowledgement of the use of information contained in publications is adequately catered for by acknowledging these sources in the appropriate place in the text and in the list of sources consulted at the end of the treatise

1.1.5 Abstract

Every treatise should contain an abstract (in Afrikaans and English for treatises in Afrikaans) which has to be as informative as possible of the contents so that the reader gets the gist of the essential matter covered. The abstract is not a description of the project, but a condensed statement of the most important aspects and information in the treatise
The abstract should be self-contained, and should not exceed 150 words

The abstract must state

- the title of the treatise, the name of the author, the name(s) of the study leader(s), the institution under whose auspices the study was carried out and the date (month and year) (See Annexure 4 for a typical example)
- the primary objectives and scope of the project
- the methods used
- the factual findings and achievements as concisely and informatively as possible

The abstract is presented immediately after the acknowledgements, on a separate page, and is listed in the table of contents

1.1.6 Table of contents

A table of contents is essential for every treatise. It is a complete list of the numbered headings and subheadings, the list of sources consulted and of any annexures, together with the respective page numbers. Its purpose is to provide a sequential overview of the treatise and to facilitate the easy location of a particular section

The table of contents is not listed in the table of contents. It is not visibly paginated

1.1.7 List of figures, tables and abbreviations

Graphs, illustrations, line drawings, maps, diagrams, plates and photographs contained in the report are referred to and numbered as 'figures' (Figure 1, Figure 2, etc)
All figures and tables should be numbered and listed. Compile separate lists for figures and for tables if there are more than five figures or tables, otherwise list them together under one heading "list of figures and tables"

The list of figures and the list of tables contain the number and the caption of each figure or table, and indicate the number of the page on which that figure or table appears in the text.

The list of figures and the list of tables follow directly after the table of Contents.

All abbreviations used in the treatise should be listed separately for ease of reference and inserted as a list of abbreviations after the list of figures and list of tables. By “abbreviations” is meant abbreviations for institutions (e.g. SABS) or acronyms (e.g. SASOL) or abbreviations which may have a specific meaning in the relevant industry but are not necessarily in common use (e.g. PPP, which could mean “Public-private Partnerships” or “Public Participation Process”, depending on context). Common grammatical abbreviations need not be included.

1.2 Corpus of the treatise

The corpus is the largest and most important part of the treatise. It consists of the following two sections:

- main text
- list of sources consulted (bibliography)

1.2.1 Main text

The main text of the treatise has a relatively simple format. In general, it should achieve three objectives:
(a) It should acquaint readers with the problem that has been researched and explain its implications adequately enough so that they have a clear orientation to the problem.

(b) It should present the data fully and adequately. The data within the treatise should substantiate all the interpretations and conclusions that the treatise contains.

(c) It should interpret the data for the reader and demonstrate exactly how the data resolve the problem that has been researched. A report that merely presents raw data and uninterpreted fact (in the form of tables, graphs, histograms, and other data-summary devices) is of little help to the reader in deriving meaning from those data.

The following is a typical outline of the main text:

Chapter 1: The problem and its setting
Chapter 2: Review of the related literature
Chapter 3 to ?

A logical division is to devote one chapter to each subproblem and its pertinent data. Present the subproblem, present the data germane to it, analyze and interpret those data, and present conclusions warranted by the data. Each chapter usually ends with a summary section in which the findings of the particular chapter are shown in relationship to the general problem and the previous subproblems. In this way, a tightly woven web of communication is established throughout the report.

Chapter ??: Summary, conclusions and recommendations
1.2.1.1 Chapter 1: The problem and its setting

The first chapter of the treatise should have but one purpose: to create between the writer and the reader of the treatise a meeting of minds. The reader should be able to comprehend from this description alone what the problem is and what its ramifications are.

The following are subheadings, which should appear in the first chapter, amplified by brief notes under each subheading:

- **Introduction** (if necessary)

  An introduction is not essential for all treatises. If, however, it is found necessary to describe the rationale, background, context or other information surrounding the problem being researched in order to understand the relevant problem comprehensively, it should preferably be not more than a few paragraphs. The idea is to acquaint the reader with the problem at the outset of the report.

- **The problem**

  The problem is at the heart of every research project. The problem should be stated in precise and unmistakable terms - this is the first requirement in the research process. "The statement of the research problem must imply that, for the resolution of the problem, thinking on the part of the researcher will be required. Such analytical thinking, which squeezes meaning out of the mere accumulation of facts, is what is called the interpretation of the data. Those who read the statement of the research problem must explicitly understand that at the summit of the research you will
dispassionately analyze the accumulated facts to discern what those facts say in terms of the resolution of the problem

There is a basic directive for the statement of the problem: Always state the problem in a complete grammatically correct sentence in as few words as possible. Your problem should be so clearly stated that anyone anywhere in the world (who reads English) may read it, understand it, and react to it without help

You need not write an orientation essay in order to state a problem. In most cases no background build-up is necessary - just a straightforward plunge into the depths of the business at hand e.g. "The purpose of this study is to"

- **The subproblems**

  If the problem has been divided into subproblems, these should be stated following the statement of the problem. The statements should comply with the guidelines set out above for the main problem statement. Subproblems are commonly stated in the form of questions

- **Hypotheses**

  Having stated the problem and, where applicable, its attendant subproblems, an appropriate hypothesis (an intuitive feeling, a hunch, a supposition, or an educated guess with respect to the outcome of the problem) in respect of the main problem and also in the case of each subproblem, where applicable, shall be set forth. Hypotheses are necessary in order to give the researcher a sense of orientation, a direction in which to look for facts and verifying whether the facts support the conjecture
• **Delimitations**

Any delimitations should also be set forth. All who read the research report should know precisely how far the research effort extended and where the limits were set. Into what relevant areas did the research effort not inquire? What aspects of the problem have not been studied?

• **Definitions of terms**

Terms that may be ambiguous or that may be used in a specialized sense must be defined. For a meeting of minds, it is imperative that reader and researcher be concerned with precisely the same orientations to the problem, the same concepts, the same ideas. This is accomplished by careful definition of any terms that may be open to different interpretations.

• **Assumptions**

Assumptions (self-evident truths) provide the foundation upon which the entire research structure rests and it is therefore essential that the critical assumptions which underlie the problem being researched be set forth [For example of such assumptions see Leedy (1997) page 7]

• **Importance of / need for the study**

The importance of/need for the study both to the academic audience and the practical reader should be indicated.

• **Research methodology**

The research methodology adopted should not only be stated but should be justified.
1.2.1.2 Chapter 2: Review of the related literature

*Get the proper psychological orientation.* Be clear in your own thinking. Know precisely what you are attempting to do. The review of the related literature section is a discussion of the studies, research reports, and scholarly or broad-spectrum writings that bear directly on your own effort. Consider the review of related literature in your document to be a discussion with a friend about what others have written in relation to what you plan to do. Viewing the literature section in this way will help you develop the proper psychological perspective and will help you see your own effort in relation to the efforts of other researchers. A conscientious and thorough review of the literature related to the problem can open up new possibilities and new ways of looking at the problem that may otherwise be totally missed.

*Have a plan.* Before beginning to write the review of the related literature, therefore, outline what you plan to say. Always consider first the classic studies, the historically oriented writings that have prepared the way for your research effort, as well as those of others. Begin your discussion of the related literature from a comprehensive perspective, like an inverted pyramid – broad end first. Then, you can deal with more and more specific or more localized studies that focus more and more on your specific problem.

*Review the literature; Don't reproduce it!* Quoting passages from the literature and citing the words or ideas of others is important, but more important is what you say about the study, rather than what the author says in the study. Do not adopt the format of summarizing each source consecutively, e.g. “Smith (1998) said” “and Jones (1999) said” “, but integrate the present status of knowledge.

*Summarize what you have said.* Every discussion of literature and associated research relating to the problem under consideration should end with a brief summary section in which you gather up all
that has been said and set forth its importance in terms of the research problem. Perhaps the most important question that any researcher can ask and should ask continually throughout the progress of the research study - is, *What does it all mean?*

1.2.1.3 **Chapter ? : Summary, conclusions and recommendations**

The conclusions are a clear and orderly presentation of the findings and deductions made from the research reported. The conclusions reached should be based only on substantiated evidence presented, and not on unsupported evidence. The conclusions must be interpreted within the framework of the original problem. The recommendations statement contains concise statements of justified further action or suggested research emanating from the conclusions reached.

1.2.2 **List of sources consulted (Bibliography)**

Every treatise should list and acknowledge all literature and other sources of information used by including full details in the list of sources consulted. (See Annexure "1" for the method of reference)

1.3 **Annexures**

Supplementary information to the main text, or information which is either bulky or breaks up the flow of the text, should be placed in annexures. Typical annexures are sections of illustrations, questionnaires, extensive statistical data, description of equipment and techniques, or computer programmes. Each annexure must be identified by consecutive numbers (Annexure 1, Annexure 2, etc) and a descriptive title. These numbers and titles are used for reference purposes in the text and in the table of contents. A single annexure is not numbered.
Each annexure starts on a new page. Annexures follow the list of sources consulted at the end of the treatise. The pagination of the annexures should be consecutive and should continue the pagination of the text and the list of sources consulted.

In the table of contents, the entry for the list of annexures follows the entry for the list of sources consulted, but precedes the entry for the list of figures and the list of tables.

2 OVERALL GUIDELINES

2.1 Structure of the treatise

The writing of a treatise should not commence before the full framework of headings with a fairly detailed indication of their contents has been drawn up. This helps to keep the different sections in logical order, importance and proportion.

The order and underlying structure of the treatise and the status of the various divisions within each chapter are indicated by numbering and the use of different types and size of heading. Bold and larger headings are used for chapter headings, smaller headings for divisions and further subdivisions. Do not use capital letters, underscoring or italics in headings to indicate structure.

Guidelines

- Headings of divisions should relate to the text covered
- All headings should be concise and as informative as possible

2.2 Numbering of divisions and subdivisions -

Numbering is essential because it:

- clarifies the sequence, importance and interrelation of individual divisions and subdivisions
• simplifies search and retrieval and the citation of single parts of test
• facilitates references within the treatise
(See Annexure “2” for method of numbering)

2.3 Presentation and layout of text

2.3.1 Language usage

• Use British and not American spelling
• Keep sentences short and concise; use the simplest word which conveys the correct meaning
• Do not use the personal form (I, we, the author)
• Synthesize numerical information in tables, graphs or charts
• The text should not include abbreviations not generally recognized
• Define abbreviations and symbols when they first occur in the text
• Display calculations separately and prominently and do not include in text
• Write out numbers lower than ten, except if these are followed by a recognized abbreviation (2,5km, etc) or when indicating proportions (1 : 4, etc)

2.3.2 Layout of text and margins

The International Organization of Standardization (ISO) recommends the following layout for text

• Except for the first letter, the title of the treatise, the name of the author, headings of chapters, sections and subsections are printed in lower case
• Do not indent the first word of a paragraph
• Underscoring or italics is not to be used in headings
• Leave a blank line between paragraphs
• Do not use footnotes with additional information at the bottom of the page and do not add sections with notes at the end of chapters.
Information vital to the report must be worked into the text, supplementary information is included as annexures

- The text should be typed in double spacing, on one side of the page, on A4 size paper (210mm x 297mm)
- Margins should be as follows:
  top margin 25mm, left and bottom margins 40mm

2.3.3 Equations and formulae

- If the equation or formula is very short, place it in the text, preceded and followed by an extra space
- Indent longer equations and formulae from the margins and separate them from the preceding and the following text by a blank line
- If there are clusters of equations and formulae in the text, identify them by consecutive numbers placed in parentheses at the end of the line
- Refer to equations or formulae in the text as equation (4) or formula (4)
- If the equation or formula is too long for a line, break before an equal sign, or after a plus, minus, multiplication or division sign
- Where it is necessary to include fractions in solid text, reduce them where possible to a single level by using a solidus (/) or, where applicable, the negative index

2.4 Illustrations

The term illustration includes graphs, drawings, photographs, maps, diagrams and computer printouts. They are used to supplement the text and to state points clearly and effectively

Illustrations should be placed in the text to which they relate. Illustrations not essential to the understanding of the text, or collections of many illustrations which break up the flow of the text, should be presented as an annexure. Illustrations
should be numbered consecutively as “figures” in Arabic numerals, beginning with Figure 1, without distinguishing between the different types of illustrations.

Each illustration should have a legend which makes it intelligible without reference to the text. The legend follows the figure number and is placed below the illustration. Legends should not be in upper case letters, but can be bold typeface. The numbering of illustrations is independent of the numbering of tables, and should be continued in the annexures.

**Guidelines for compiling a graph**

- Place the independent variable on the horizontal axis and the dependent variable on the vertical axis.
- Use scales on both axes that will fill the graph.
- Starting from zero, label the horizontal axis from left to right and the vertical axis from bottom up, unless dealing with negative numbers.
- If parts of a scale are omitted, indicate this by a double hatch (#) mark between zero and the starting scale number.
- Label the axes comprehensively and indicate the units of measurements.

**2.5 Tables**

Use tables to summarize or provide an overview of numerical data in columns. Tables are most useful to synthesize important data concisely and to show up relationships. Being self explanatory, they reduce the amount of discussion needed in the text. It is unnecessary to describe in the text what can be clearly communicated in a table.

Each table should be numbered consecutively throughout the treatise, including the tables in the annexures. Do not number tables by chapter. A single table in a treatise is not numbered. The numbering of tables is independent of the numbering of illustrations.
Each table must have a legend (title), which unlike illustrations, is placed above the table. Legends should not be in upper case letters, but can be bold typeface

**Guidelines for compiling a table**

- Arrange tables so that inferences are evident
- Distinguish clearly in column headings which are percentage columns and which are numerical data columns, and indicate the units of measurement
- Make the meaning of a table so clear that it is not necessary to refer to the text
- Present the same kind of information in a column
- Arrange data to facilitate comparison within and among labels
- To facilitate comparisons, present the most significant data in adjacent columns
- Standardize formats and terminology of tables that will be compared with each other
- Number tables sequentially in Arabic numerals 1, 2, 3, etc throughout the report
- The legend of the table should be concise and describe the subject covered clearly, not repeating the wording contained in row and column headings

**2.6 Pagination**

The treatise must be printed only on one side of the sheet

- Beginning with the title page, which will be page 1 and a recto page (right-hand side), the numbering of pages of the treatise should run consecutively and include plates, fold-outs, the list of sources consulted and annexures
- The title page, verso of title page, and the table of contents page are counted but not visibly numbered.
- Numbering is in Arabic numerals only. ISO does not advocate the numbering of the front matter in small Roman numerals (i, ii, iii, etc)
- Page numbers should be placed in the same prominent position, preferably below the text in the centre of the page
- Blank pages are counted but not visibly numbered
2.7 Size of pages

The treatise should be of ISO A4 size (210mm x 297mm)

2.8 Number of copies required and binding

Two copies of the treatise are required for examination purposes and should be submitted after having received approval from the study leader(s). These copies should preferably be spiral-bound with plastic material or other similar binding system.

The treatise must be properly bound in a hard cover after having been awarded a pass-mark and having incorporated all the alterations and additions required by the examiners. Three copies are required by the Department where only one external examiner is used. Where more than one external examiner or study leader is used extra copies shall be supplied.

List of sources consulted


ADDITIONAL SOURCES

*Very useful additional South African sources include the following:*


Yenza 2006. “Learn how to use the Internet” and “Start your research”. http://www.nrf.ac.za/yenza/

You may need to hone your reading and writing skills. A very good, professional guide to reading and writing is the following (it also includes chapters on the writing of essays and on research):


**An excellent guide to study skills is**


**A good guide on research design is**


**A more popular, but extremely useful guide to research sources is**

ANNEXURE 1

REFERENCE STYLE

1. THE USE OF REFERENCES

When you prepare a treatise, you need to acknowledge all the sources you used. This serves four purposes: It demonstrates that you have read the relevant literature, it substantiates your arguments, it allows the reader to find and check the sources you used, and by acknowledging sources you avoid the problem of plagiarism (i.e. presenting the ideas or discoveries of another as one's own).

British Standards BS 1629:1976 and BS 5605:1990 define a bibliographical reference as:

"a set of data or elements describing a document, or part of a document, and sufficiently precise and detailed to enable a potential reader to identify and locate it".

The term citing refers to the identification within your text of the document from which you have obtained your information, whereas a reference is the detailed description of the document from which you have obtained your information.

There are a variety of accepted conventions for citing bibliographic references. Several of these are set out in the British Standards BS 1629:1989 and BS 5605:1990.

The method of recognition or reference chosen by our Department is the so called Harvard Method contained in the standard ISO 690: Documentation —bibliographic references — content, form structure. with minor modifications. (In the standard it is called the First Element and Date Method)
2. CITATIONS (SOURCES MENTIONED IN THE TEXT)

The Harvard Method implies that items are referred to in a list of sources by stating it in an abbreviated form - author and year of publication - in brackets in the text:

Maltha (1997, p. 3) purports that half a century ago the researchers in a particular field, all knew each other

OR

Half a century ago all researchers in a particular field knew each other (Maltha. 1977, p. 3)

If multiple pages are referred to, the abbreviation pp. should be used.

ALTERNATIVELY the colon sign : can be used in stead of the abbreviation for page p. or pages pp. AS FOLLOWS:

Maltha (1997:3) purports that half a century ago the researchers in a particular field, all knew each other

OR

Half a century ago all researchers in a particular field knew each other (Maltha. 1977:3)

The references in brackets appear on page 3 in the work of Maltha which appear on the list of sources as follows:


If the citation refers to two authors, both names are mentioned, e.g.
Wurtzebach and Miles (1994:23) claim that ………………

If the citation refers to a source with three or more authors, the name of the first author only is mentioned, followed by *et al.*

According to Pyhrr *et al.* (1989) …………

3 THE USE OF QUOTATIONS

You may wish to quote the words of another author directly. Such a quotation can range from a single word to a longer paragraph(s) and should be an exact quotation of the original, including any italics or errors of spelling or punctuation.

If the original quotation does contain an error the word *sic* enclosed in brackets should be included directly after the original. For example:

Smith (2006:3) stated that “…Nelson Mandela became State President of South Africa in 1992 (*sic*)”.

If you wish to emphasize something in the original quotation, you should indicate that it is your and not the original author’s emphasis, for example

“So the implication is that the market will only compensate the investor for *systematic* (my emphasis) risk” (Jaffe & Sirmans, 1995:406)

If the quotation is less than one sentence you should use quotation marks (“…”), followed by the author’s surname, year of publication and page number, for example:

Jones (1998:42) claims that “solar cycles have a determining effect on the personality of a person”.

OR
It has been claimed that “solar cycles have a determining effect on the personality of a person” (Jones, 1998:42)

If the quotation is longer than a sentence, the quote should be indented left and right without the use of quotation marks:

The theory suggests that a competitive market will not pay a premium for any diversifiable risk that could be eliminated by adding less than perfectly correlated investment to the portfolio. So the implication is that the market will only compensate the investor for systematic risk

(Jaffe & Sirmans, 1995:406)

If part of the original text is omitted, indicate this with three full stops in brackets (…) in the body of the quotation, or four full stops (…) at the end.

The theory suggests that a … market will not pay a premium for any diversifiable risk that could be eliminated ….

(Jaffe & Sirmans, 1995:406)

Be careful, however, not to change the meaning of the original author.

4 SECONDARY REFERENCING

If you wish to quote a source that has been referred to in another source, you should cite the primary source and the source you have read.

Examples:

Rowley (1991) cites the work of Melack and Thompson (1971) who developed the McGill Archaeology questionnaire.


In the list of references the work by Rowley would be the only one included.

_N.B. Secondary referencing should be avoided if at all possible._

5  EXAMPLES OF REFERENCE VARIANTS IN THE TEXT

(a)  Reference to an author who published more than once in a year

Brown (1976 a) inferred that …………. but later modified his conclusion (1976 b) by …………..

(b)  Reference to an author who published in various years

Shera repeatedly (1960, 1961a, 1961b, 1965) warned that ……………

(c)  References to authors with the same surname

A White (1972, p. 14) independently came to the same conclusion as B. White (1970, p. 3), who stated that ………………….

(d)  Reference to a contribution by an author in a work edited by another

Technical reports are generally not printed (Rowland, 1975, p. 383), but…..
(The abovementioned statement refers to the example under A12)

(e)  Reference to more than one author in one particular place

It corresponds with the views of various other authors (Blake, 1965; Doyle, 1965; Smith, 1966; Zuary, 1967) and it can ……………
(f) **Reference to a source of which the first description element is not an author**

In the critical biography *Modern Historians…*, p. 22 it is purported that ….

(The abovementioned portion refers to the example under A4)

(h) **Reference to a source which does not contain date of publication**

The abbreviation n.d. is used to denote “no date”

Smith (n.d.) has written and demonstrated……………

or indirectly

(Smith n.d.)

(i) **Page numbers**

Page numbers from where a reference is made should be indicated, especially in the case of quotations, to help the reader trace your sources.

Prinsloo (2004, p.169)

or indirectly

(Prinsloo, 2004, p.169)

6 **TABLES AND DIAGRAMS**

If you reproduce data from a diagram or table, or copy the entire table or diagram, reference should be made to the source to enable the reader to verify the data
If an entire table or diagram is reproduced the citation should appear as a footnote to the table. Fuller details should be included in the reference list at the end of the essay.

7. THE LIST OF SOURCES (LIST OF REFERENCES)

All references used (cited) in the main body of the treatise need to be included in the list of sources (reference list). Include all books, journals and other media in the same list.

The list of sources is arranged alphabetically according to the first element of the description thereof (e.g. the author)

A bibliography, if requested by the study leader, at the end of your treatise will include all your cited works together with references to background reading that you have undertaken. This should also be in the Harvard style.

The way in which the element in such a bibliographic description is to be reproduced and in what order is specified hereunder. After each specification various examples are provided

A BOOKS

The information for each entry of a book on the list of sources is given in the following order:

- author (surname and initials, divided by a comma)
- year of publication
- title (italics, bolt or underlined)
- edition (except first)
- location of publication
- publisher

A1 A book by one author

(a) A book with a sub-title:


(b) A later edition:


Note that the first or only edition is not indicated as such.

A2 A book by two authors

Where the name of more than one author appears on a source, the name which is most prominently displayed, is entered first according to the standard. Where equal prominence is given to the names, the name which appears first is to be entered first:


Note that:
- the ampersand (&) is used before the last name
- you should not use “*et al*” in your reference list.

A3 A book by more than two authors

Note that:
- the ampersand (&) is used before the last name
- although the citation would read: (Pyhrr *et al*., 1989), you should not use “et al” in your reference list.

**A4**  
A book of which the author is not mentioned


**A5**  
A book with an institution, organisation, association, etc as author

Medical Research Council ….  
British Museum ….  
Academia Scientiarum Fennica ….  
Association of South African Quantity Surveyors ….

In the case of the "subordinate" body, that body is stated after a full stop:

University of Pretoria. Faculty of Engineering, Built Environment and Information Technology ……  
Imperial Chemical Industries. Paint Division …….  
Englise Reformee. Synode National ……

**A6**  
A publication by the State or Local Authority

A 7  Proceedings of conferences etc


*The Dewey Decimal Classification System: outlines and papers*. Edited by M.F. Tauber, CJ Frarey and C Batts. 1968. New York: Columbia University School of library Services


A 8  A book with an editor or compiler as author

This is identical to a book by an author, except that the abbreviations ed. or eds. follows the name of the editor(s), that is:

Author(s) surname(s) and initials, followed by ed. or eds. Year of publication of edition referred to (not printing or impression) Full title of book/thesis/dissertation (including subtitle) in italics Edition of book (if not first edition) Place of publication Name of publisher

For example:


A9  **A book by an author translated by another**


A10  **A book of which the author is not mentioned and is translated**


A11  **A book which forms part of either a series, or a publication with a name under which books are published as separate titles**


(a)  **Part or a series:**


(b)  **Part of a publication under a common name:**


A12  **A contribution of an author in a work edited by another**

Quote the author of the chapter (not the editor/s of the book) and the date of the book. In the reference list you quote the author and date of the chapter first, followed by a reference to the book. Include the relevant page numbers to identify the chapter. For example:


A13  **Academic dissertations and theses**

*These publications are generally not published in the normal sense of the word. The standard does not give any specific examples of, or directions for this type. The principles of the standard and other existing conventions are made applicable here.*
### B ARTICLES IN ENCYCLOPAEDIAS

An article in an encyclopaedia is described in the following order of particulars:

- author(s)
- year of publication
- title of the article
- name of the encyclopaedia (italics, underlined or bold)
- page(s) on which the article appears

#### B1 An article by one author


#### B2 An article by two authors

Varley, DH. and Immelman, RFM. Libraries. *Standard Encyclopaedia of Southern Africa*, vol. 6, p. 618

#### B3 An article by more than two authors

Here et al can also be made use of as indicated under A3
B4 An article of which the author is not mentioned

Phoenicia. 1958. Encyclopaedia Americana, vol. 6, p.28

C ARTICLES IN JOURNALS

An article in a journal is described in the following order of particulars:

- author(s)
- year of publication
- title of the article
- name of the journal (italics, underlined or bold; it may be abbreviated)
- volume
- number
- page(s) on which the article appears

C1 An article by one author


OR


C2 An article by two authors


C3 An article by more than two authors
See note under B3


**C4 An article of which the author is not mentioned**


**C5 An article in a periodical or journal with a seasonal date**

The general sequence is: Author. Date. Title of article. *Title of journal*, volume or number of issue: page reference, Season.

Example:


Note that the season “Spring” follows the page reference

**C6 An article in a periodical or journal which has been reprinted in a book**


**D NEWSPAPER REPORTS / ARTICLES**

An item in a newspaper is treated in the same manner as an article in a journal. The particulars are given in the following order:
- author(s) (in the case of an article) / headline of the report
- year
- title of the article
- Title of the newspaper (italics, underlined or bold)
- date
- page(s)

D1 An article / report under the name of an author


D2 A report


E OTHER SOURCES

*The standard does not cover manuscripts and other unpublished material and in this case the principles of the standard in accordance with other existing conventions have been applied*

E1 A photostatic copy


E2 A letter

E3 A microform


E4 A sound-recording

Diederichs, N. 1963. Interview with *Dr N Diederichs, Minister of Finance*, 6 January 1963

E5 Internet sources

Referencing a website is similar to referencing a book or journal - you should include the author, date and title. For web pages you must include the full address of the page, not just the address of the site. This can be copied from the address bar which normally appears at the top of the browser. In addition, you need to include the date of access, because webpages can be modified.

*Example - in the text:*

“The University of Pretoria strives to be -

- a leader in higher education that is recognised internationally for academic excellence and a focus on quality
- a university that is known for international competitiveness and local relevance through continuous innovation
- the university of choice for students, staff, employers of graduates and those requiring research solutions
- a university with an inclusive and enabling, value-driven organisational culture, that provides an intellectual home for the rich diversity of South African academic talent
- the premier university in South Africa that acknowledges its prominent role in Africa, is a symbol of national aspiration and hope, reconciliation and pride, and is committed to discharging its social responsibilities.”
Example - in the reference list:


8 TIPS ON GETTING STARTED

It is important to record all the documents you read. Many fruitless hours can be lost in trying to trace a source which you may have referred to but for which you neglected to jot down all the necessary information.

The following should be noted:

- Author of the document [personal author / organisation / editor(s)]
- Date of publication (for electronic documents, date made available)
- If a book - the title of the book, place of publication and publisher
- If an article - article title, journal title and volume and page numbers
- If a chapter - the chapter title and book title
- If a website - identify what part of the site you are looking at. If in doubt, use the home page address and give the route to the page
- For electronic sources, note the date accessed and take a printed copy of the front page

Sources

ANNEXURE 2

FORMATTING HEADINGS AND SUBHEADINGS


- **Level 1 heads**, the most important ones, are in **ALL CAPITAL LETTERS in bold typescript** and centred on the page. These are headings of the largest units of writing; for instance, they may be the titles of the various chapters in a proposal or research report. They correspond with Arabic numerals 1, 2, 3, and so on, in an outline.

- **Level 2 heads** are also in **ALL CAPITAL LETTERS in bold typescript** and are not indented. They correspond with Arabic numerals 1.1, 2.1, 3.1 and so on, in an outline.

- **Level 3 heads** have a **Single capital letter followed by lowercase letters in bold typescript** and indented. They correspond with Arabic numerals 1.1.1, 2.1.1, 3.1.1 and so on, in an outline.

- **Level 4 heads** have a **Single capital letter followed by lowercase letters in italics** and are indented. They correspond with Arabic numerals 1.1.1.1, 2.1.1.1, 3.1.1.1 and so on, in an outline.

- **Level 5 heads** have a **Single capital letter followed by lowercase letters in italics**, indented and are followed on the same line by the first paragraph in the section. They correspond with lowercase letters in brackets (a), (b), (c) and so on, or **bullets**, in an outline. If you use this format, your various headings would look like this on the page:
1.0 FIRST LEVEL HEAD

1.1 SECOND LEVEL HEAD

1.1.1 Third level head

1.1.1.1 Fourth level head

- Fifth level head. The next paragraph begins here . . . .

OR

(a) Fifth level head. The next paragraph begins here . . . .

**NB** The format suggested here is not the only one you might use. However, approval must be obtained from the leader / supervisor for utilising other schemes.
ANNEXURE 3

QUALITY MANAGEMENT IN SOUTH AFRICAN ARCHITECTURAL PRACTICES

by

Paul Lloyd Muntingh

treatise submitted in fulfilment of a part of the requirements for the

MASTER OF SCIENCE (PROJECT MANAGEMENT)

in the Faculty of Engineering, Built Environment and Information Technology
University of Pretoria

Study leader: Mr A R Monteith

December 2005
ANNEXURE 4

ABSTRACT

Title of treatise: The Major Contracts Building Contract: A critical analysis
Name of author: DJ Rouse
Name of study leader: Prof GK le Roux
Institution: Department of Quantity Surveying
Faculty of Economic Sciences
University of Port Elizabeth
Date: January 1989

The Agreement and Schedule of Conditions of Major Contracts Building Contracts was first introduced into the South African building arena in May 1986 as a recognised form of contract documentation, agreed between the South African Property Owners' Association and the Building Industries Federation (South Africa), applicable to projects exceeding R 12m in value and which have an average monthly turnover of not less than R1 m.

This critical analysis provides a valuable and topical guide to the members of the construction industry and its allied professions. As it compares the Major Contracts Building Contract with the existing well-known "Standard white form" 1981/1988 Edition, offers critical comment on the differences between these two forms of contract, suggests how several supplementary documents may need to be devised or amended when used in conjunction with the innovative Major Contracts Building Contract, offers recommendations on defining the choices to be made between the "MCC" and the "white" forms of contract in South Africa and prognosticates on the new Joint Building Contracts Committee future document which will possibly be published in 1990.
1. Definition of a treatise

A treatise is a written research report of limited scope which demonstrates in terms of language, style, documentation and argumentation that the student is acquainted with the methodology of research and is submitted in partial compliance with the requirements of the acquisition of a master’s degree in accordance with prescribed regulations.

2. Aim

The aim with a treatise is to provide students an opportunity to demonstrate their ability to:

- Do independent research;
- Use scientific research methods in a scientific investigation; and
- Communicate in writing according to scientific standards and requirements.

3. Research methods

It is mandatory that students do empirical research of limited scope which may be of a qualitative or quantitative nature.

4. Weighting

The weights of core aspects in the examination of a treatise as expected by the Department are shown on the marking sheet (see “Confidential report of the external examiner”). Candidates have to obtain a sub-minimum of 40% in each section (a to g) with an average of 50% (minimum) to pass.

5. Report

The examiner is required to submit a written report on the Department’s standard form titled “Confidential report of the external examiner”, together with the completed mark sheet.
CONFIDENTIAL REPORT OF THE EXTERNAL EXAMINER

Course:

Candidate:

Student number:

External examiner:

Study leader:

Title of treatise:

I have examined the abovementioned research report and my recommendation is indicated hereunder:

- That the treatise be accepted Yes / No
- That the treatise be accepted but that certain editorial and/or minor amendments be made (see attached comments) Yes / No
- That the treatise be rejected (see attached comments) Yes / No

Mark awarded (see mark sheet): ........... %

Signature: ......................................... Date: ..........................
Candidate:

Student number:

Comments of external examiner:

General:

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Technical aspects:

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Linguistic care:

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Further comments:

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Signed:.............................................. Date:.............................
Candidate:

Student number:

Mark sheet (mark to be carried to Confidential Report)

<table>
<thead>
<tr>
<th>Section</th>
<th>Weight</th>
<th>Mark</th>
</tr>
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<tbody>
<tr>
<td>a Subject, objective, hypothesis and presentation of the problem</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>b Research method, scientific processing and justification of statements</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>c Source study</td>
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<tr>
<td>d Contents</td>
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<td></td>
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<tr>
<td>e Summary, conclusions and recommendations</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>f Contribution to science</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>g Language, style, technical composition, care and finish</td>
<td>10</td>
<td></td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
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</tbody>
</table>

Signed:…………………………………… Date:……………………..
## TYPICAL STRUCTURE OF TREATISE

<table>
<thead>
<tr>
<th>Chapter/section</th>
<th>Descriptions</th>
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<tr>
<td>1 Introduction</td>
<td>A precise explanation of what the research is about and why it is important and interesting, the research questions or hypotheses should also be stated</td>
</tr>
<tr>
<td>2 Literature review</td>
<td>A critical analysis of what other researchers have said on the subject and where your project fits in</td>
</tr>
<tr>
<td>3 Methodology</td>
<td>An explanation of why you collected certain data, what data you collected, from where you collected it, when you collected it, how you collected it and how you analysed it</td>
</tr>
<tr>
<td>4 Results</td>
<td>A presentation of your research results</td>
</tr>
<tr>
<td>5 Analysis and discussion</td>
<td>An analysis of your results showing the contribution to knowledge and pointing out any weaknesses / limitations</td>
</tr>
<tr>
<td>6 Conclusions (may form part of Ch 5)</td>
<td>A description of the main lessons to be learnt from your study (are the hypotheses supported or not?) and what future research should be conducted</td>
</tr>
<tr>
<td>References</td>
<td>A detailed, alphabetical or numerical list of the sources from which information has been obtained and which have been cited in the text</td>
</tr>
<tr>
<td>Appendices</td>
<td>Detailed data referred to but not shown elsewhere</td>
</tr>
</tbody>
</table>
THE EMPOWERMENT OF SMALL, MEDIUM AND MICRO ENTERPRISES IN FACILITIES MANAGEMENT: REALITY OR FALLACY?

by

Phumelele Paula Msweli

treatise submitted in fulfilment of a part of the requirements for the

MASTER OF SCIENCE (REAL ESTATE)

In the Faculty of Engineering, the Built Environment and Information Technology

University of Pretoria

Study leader: Prof. C. E. Cloete

May 2002
ABSTRACT

DECLARATION

ACKNOWLEDGEMENTS

CHAPTER 1: INTRODUCTION

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<td>2.4 Outsourcing</td>
<td>25</td>
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<tr>
<td>2.5 Summary</td>
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3.1 The data
3.2 The criteria for the admissibility of the study
3.3 Research methodology
3.4 Structure of the study
3.5 Specific treatment of the data for each subproblem
3.6 Summary

CHAPTER 4: RESEARCH FINDINGS (FOR EXAMPLE)

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CHAPTER 5: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

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Table 2: Facilities Management companies responses
Table 3: LBSC and training institutions’ responses.................................61
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Annexure 2  Guiding questions for labour movement interviews
Annexure 3  Guiding questions for SMME interviews
Annexure 4  Guiding questions for facilities managers and main contractors
ANNEXURE 8

DECLARATION

The following declaration must appear after the cover page of the treatise submitted by a student and be signed by him / her:

I declare that this research is entirely my own, unaided work, except where otherwise stated. All sources referred to are adequately acknowledged in the text and listed.

I accept the rules of assessment of the University of Pretoria and the consequences of transgressing them.

This treatise is being submitted in partial fulfilment of the requirements for the degree of MSc (Project Management / Real Estate) [delete whatever is inapplicable] at the University of Pretoria.

It has not been submitted before for any degree or examination at any other university.

_____________________
Signature of Student
PLAGIARISM

(Source: EBIT Faculty 2003 Circular)

The Merriam Webster dictionary defines plagiarism as:

<table>
<thead>
<tr>
<th>to steal and pass off (the ideas or words of another) as one's own : use (another's production) without crediting the source</th>
</tr>
</thead>
<tbody>
<tr>
<td>to commit literary theft : present as new and original an idea or product derived from an existing source</td>
</tr>
</tbody>
</table>

The Encyclopædia Britannica defines plagiarism as:

<table>
<thead>
<tr>
<th>the act of taking the writings of another person and passing them off as one's own.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The fraudulence is closely related to forgery and piracy—practices generally in violation of copyright laws.</td>
</tr>
</tbody>
</table>

"plagiarism" Encyclopædia Britannica

- Plagiarism is illegal and you can be expelled from the university if you plagiarise.
- With all information available on the World Wide Web, it is probably very tempting to cut and paste parts of articles for assignments and so on, but remember that this is illegal and that the lecturers can find the sites very easily themselves.

How to avoid plagiarism:

There are a number of sites on the World Wide Web that deal with issues around plagiarism:

- Plagiarism: What It is and How to Recognize and Avoid It
  http://www.indiana.edu/~wts/wts/plagiarism.html

- Avoiding Plagiarism
  http://sja.ucdavis.edu/avoid.htm#mexamples
You may use material written by other people, but then the thing to do is to cite the material:

Guide to Citation Style Guides
http://bailiwick.lib.uiowa.edu/journalism/cite.html

CITATION STYLES, PLAGIARISM & STYLE MANUALS
http://www.lib.berkeley.edu/TeachingLib/Guides/Citations.html

**Harvard Style:**
Harvard Referencing

References/Bibliography HARVARD STYLE
http://www.library.uq.edu.au/training/citation/harvard.html
RESEARCH ETHICS

The University requires that all research studies conducted within the Faculty that include people or animals as either informants or subjects has to be cleared by the Faculty Committee for Research Ethics and Integrity of the Faculty of EBIT.

Clearance must be obtained for applicable studies of personnel as well as students (undergraduate or postgraduate) before the study commences.

The objective of the EBIT ethics committee is to ensure that all research in the Faculty abide by ethical principles, specifically where animals or humans form part of research studies, or where research is conducted that could influence or pollute the environment. The committee considers submissions by students and personnel of the University of Pretoria that conduct their research in the Faculty of EBIT. Note that the EBIT ethics committee considers whether the research to be conducted complies with ethical guidelines, not whether the research or research methodology is correct or appropriate. The latter function is performed by the various departmental research committees.

Application forms and further information is available on the Faculty website at http://www.up.ac.za/ebit/r_ethics.html

Prof Johan Hanekom
Chair: Faculty Committee for Research Ethics and Integrity
CRITICAL (LATEST) DATES FOR MSC TREATISES

Degree in April :

- Final draft to be submitted end October, together with draft of article. Final revisions to be done during December.
- Two ring-bound copies to be submitted during the first week of January for assessment by study leader and external examiner.
- Marks must be in end of January.
- Final corrections to be done early February.
- Three final, vinyl-bound copies plus the final article, together with electronic copies of both in MSWord format and PDF format, (on CD), to be submitted four days before the end of February for the study leader to confirm compliance with all the conditions of the degree before the end of February. No degree will be awarded without the above.
- Degree awarded in April.
- Fees may not be payable for the new year if the treatise was substantially completed in the previous year (treatise dated December of previous year).

Degree in September :

- Final draft to be submitted end April, together with draft of article (latest date).
- Final revisions to be done during May.
- Two ring-bound copies to be submitted during the 1st week of June for marks by study leader and external examiner.
- Marks must be in end of June (date prescribed by Admin).
- Final corrections to be done early July.
• 3 Final, vinyl bound copies + final article, together with electronic copies of both in MSWord format (on CD), to be submitted 4 days before the end of July for the study leader to confirm compliance with all the conditions of the degree before the end of July. No degree will be awarded without the above, including the article
• Degree awarded in September.
• Fees payable for this year
INTRODUCTION

It is compulsory that every student, as part of the completing of his/her MSc treatise, submit a publication based on the treatise (or part thereof). The problem encountered by students is that very few of them have ever submitted a research paper for publication. Furthermore, they do not know which publication’s requirements to follow, as there are subtle differences in the requirements for publication between different journals.

GUIDELINES

In order to assist students in this regard, and to make it easier for the department to actually submit a paper for publication in an accredited journal, the department has drawn up the following guidelines which should be adhered to by students when preparing a paper for submission with their final treatise:

- The paper must have a title. It should not necessarily be the same as that of the treatise, especially if the paper covers only a part of the treatise.
- The names of the author and study leader, and “University of Pretoria” must follow the title.
- A short summary/abstract (not more than 100 words) must be provided before the text. If the paper is in Afrikaans, the summary/abstract must be in both Afrikaans and English.
- A list of five or six keywords, providing background of the topic, must be provided.
- The text should follow the same principles as those used in the treatise, i.e. introduction, headings and sub-headings, source references according to the
Harvard style, summary and conclusion, etc. with all pages numbered consecutively at the bottom of the page.

- The bibliography/reference list (Harvard style) should be listed alphabetically according to the names of the authors, after the text.
- Manuscripts must be in double line spacing with 25mm wide margins and a font size of 10 or 12 points.
- The length of the paper should be between 4 000 and 6 000 words.
- The paper should be submitted electronically (CD or stiffy disk) in an accepted format like MS Word.
- Any numbering should be in Arabic numbers with full stops in between (some journals prefer no numbering).

PUBLICATION

The department reserves the right to publish a paper with alterations and/or additions that might be required, in any publication of the department’s choice, with the person who acted as study leader mentioned as co-author of the paper. If a substantial amount of work is needed in order to get the paper ready for publication, or if additional work need to be done to adhere to international accepted standards, then the study leader or person responsible for such additional work shall be named as sole author of the paper, with the student’s treatise mentioned as one of the sources, or the student can be mentioned as co-author.

HINTS

Prof. TE Cloete, department of Microbiology and Plant Pathology, University of Pretoria, gave the following hints in a presentation: “Writing a research paper”:

Avoid phrases in the title such as:

- Observations on ..........
- Investigations on ..........
- Aspects of ..................
- A study of ...............  
- The effect of .............
Discussion
- The discussion answers the question: “so what?”
- Point out exceptions
- Show agreement with the work of others
- Discuss the theoretical as well as practical implications
- Show relationship amongst observed facts

Results

The whole paper will stand or fall by the results, therefore:
- Use tables and figures with discretion
- Be concise and precise
- Avoid redundancy – do not describe the obvious
- Avoid such phrases such as: “It is clearly shown in Fig. 1 that….”

EXAMPLE

Attached hereto is a copy of a paper published in a journal as an example of the required standard and format, as well as the requirements of the journal in order to act as further guidelines for writing a research paper.