



Hawler Medical University Guidelines for Writing M.Sc. and PhD Theses

**Tariq Salman Al-Hadithi, MBChB, DTM&H, M.Sc., PhD, FFPH,
FRCP**

Professor

*Department of Community Medicine, College of Medicine, Hawler
Medical University*

Namir Ghanim Al-Tawil, MBChB, DCM, FICMS/CM

Professor

*Department of Community Medicine, College of Medicine, Hawler
Medical University*

Preface

Teaching institutions particularly in developed countries have their own guidelines for writing a research. This booklet is addressed to both students and faculty members in order to facilitate the process of writing and editing theses submitted to the colleges of Hawler Medical University. This booklet gives also examples on writing references of the most common types of materials in both print and electronic formats including books, chapter in a book, journal articles, conference proceedings, conference papers, theses, and dissertations.

We are grateful to Assistant Professor Dara O. Meran, Acting President of the Hawler Medical University; Assistant Professor Fareed H. Abdulahad, Vice President of Scientific Affairs of Hawler Medical University; and Assistant Professor Ali A. Dabbagh, Dean of the College of Medicine of the Hawler Medical University who encouraged us for writing this booklet.

1. Structure and layout of the thesis

The general structure of the thesis submitted for the councils of the colleges of Hawler Medical University (HMU) is as follow (in order):

1.1. Preliminary pages.

1.1.1. Title page.

1.1.2. Quotation page (optional).

1.1.3. Certification and approval pages.

- Certification of the supervisor (s) and the head of the department and forwarding of the thesis by the dean of the college for debate.
- Certification of the examining committee and approval of the council of the college.

1.1. 4. Dedication page (optional).

1.1. 5. Acknowledgements page.

1.1.6. Abstract.

1.1.7. Table of contents.

1.1.8. List of tables.

1.1.9. List of figures.

1.1.10. List of abbreviations.

1.2. Body of the text.

1.2.1. Introduction.

1.2.2. Chapters of the thesis:

- Chapter 1. Literature review.
- Chapter 2. Methods.
- Chapter 3. Results.
- Chapter 4. Discussion.
- Chapter 5. Conclusions and recommendations.

1.2.3. References.

1.2.4. Appendices.

1.2.5. Abstract and the title page in Kurdish and Arabic languages.

2. General considerations

- 2.1. The thesis should be bound with hard cover when finally submitted to the HMU.
- 2.2. A white blank paper should follow the front board and another one before the rear board.
- 2.3. White papers A4 (297 X 210 mm) are used, and printing should be on one side of the paper.
- 2.4. The margins of the pages should be as follow: 1.5 inches for the left margin and 1 inch for other margins; right justification is not necessary.
- 2.5. Preliminary pages should be paginated with lower case Roman numerals starting with title page. However, the number on the title page should not be shown, although the page is counted as (i). Page numbers should be at the bottom center of the page.
- 2.6. Pagination in Arabic numerals starts with the first page of introduction through the appendices pages. Page numbers should be at the upper right corner of the page. The minimum font size for Arabic numerals is 10, which must be consistent throughout the thesis.
- 2.7. The total number of pages is usually not more than 120 pages for M.Sc. theses, and 200 pages for the PhD theses.
- 2.8. The number of references depends on the topic, but generally a minimum of 50 references is required.
- 2.9. Titles of the body of text parts should be written in upper case letters, e.g. INTRODUCTION, PATIENTS AND METHODS,
.....
- 2.10. Line spacing should be 1.5 space of the Microsoft Word computer program throughout the text.
- 2.11. New paragraph starts at column 1 of the Microsoft word computer program (i.e. not indented) leaving a space of 6 pt between the paragraphs.
- 2.12. The font type is “Times New Roman” and the font size is the

standard 12- point, with *no use of Italic or bold letters* (or non-formal printing such as WordArt or colored printing) in all sections and chapters of the thesis unless indicated.

2.13. Numerals 1 to 9 in the text are fully written i.e. one, two...

3. The hard cover

3.1. The layout of the outside front board of the hard cover is the same as

that of the title page but the letters are printed in golden prints.

3.2. Logo of the HMU should be above the title of the thesis at the middle of the front board of the hard cover.

3.3. The degree of the thesis (M.Sc./PhD) should be written horizontally (if possible) at the top of the spine of the thesis.

3.4. The name of the candidate should be written vertically along the spine of the thesis centered at the middle.

3.5. The year of the study should be written horizontally (if possible) at

the bottom of the spine of the thesis.

3.6. The color of the hard cover of the thesis is red in all specialties.

4. Title page

The title page should provide the following information in order:

4.1. The *officially approved* title of the thesis written in capital and bold letters (*font 16*), with second and succeeding lines indented on each side of the page as to form an inverted pyramid. The title should be concise and descriptive. However titles that are too short may lack important information. Breaking the title into a title and subtitle when it has too many words should be considered. *Abbreviations should not be used in the title.*

4.2. Submission statement:

It should indicate that the work is submitted to partially fulfill

the degree requirement and it should be written in capitals (*font 14*) and arranged in an inverted pyramid as follow:

A THESIS SUBMITTED TO THE COUNCIL OF THE
COLLEGE
OF AT HAWLER MEDICAL UNIVERSITY
IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF (MASTER OF SCIENCE OR
DOCTOR OF PHILOSOPHY) IN (SPECIALTY)

- 4.3. Full name of the candidate, followed by his qualifications, and department of the study. It should be written as it appears in the university records and all in capitals and centered. Candidates holding MBChB degree should not prefix their name with the title "Dr".
- 4.4. Academic title and name of the supervisor (s), followed by degree (s). Supervisors holding MBChB degree should use their academic title only.
- 4.5. The month and year of submission of the document in calendar year
(A.D.) on the left side, Islamic calendar (A.H.) on the right side, and
Kurdish calendar in the middle of the title page (Appendix I).

5. Quotation page

The candidate may write a verse from a holy book, a gnome, or a proverb that pertains to the work he did.

6. Certification and approval pages

The candidate has to stick closely to the format used in a recently approved thesis according to the requirements of the HMU.

6.1. Certification of the supervisor (s), and the Head of the Department, and forwarding of the thesis for debate by the dean (on the same page).

I (we) certify that this thesis (title of the study) was prepared by (student's name) under my (our) supervision at the Department of, College of....., Hawler Medical University in partial fulfillment of the requirements for the degree of Master of Science (or Doctor of Philosophy) in..... (specialty).

Academic title and name of the supervisor (s)

Degree (s)

Date

Certification of the Head of the Department of

I certify that this thesis was prepared by (name of candidate) at the department of

Academic title and name:

Degree (s)

Head of the department of.....

Date

In view of the available recommendations, I forward this thesis for debate by the examining committee.

Academic title and name:

Degree (s)

The Dean

Date:

6.2. Certification of the examining committee and approval of the college council (on the same page):

We, the members of the examining committee certify that, after reading this thesis (title of the study) and examining the candidate (name of the candidate) in its contents, it is adequate for the award of the degree of Master of Science (or Doctor of Philosophy) in(specialty).

Academic title and name
Degree (s)
Teaching institution
Member

Academic title and name
Degree (s)
Teaching institution
Member

Academic title and name
Degree (s)
Teaching institution
Member and supervisor
Chairperson
Approved by the
council of the college of

Academic title and name
Degree (s)
Teaching institution

Academic title and name
Degree (s)
The Dean
Date

7. Dedication

This is totally optional. Dedicating the thesis to parents, wife, children, or a friend is usual. It should be as short as possible.

8. Acknowledgements

This is one of the most read parts of the thesis. The researcher has to be sure that he thanks, by name, all those who helped him throughout the research. It is very nice from the researcher to appreciate the contributions and help of sponsors and friends. The acknowledgement recognizes supervisor's assistance as well as that of faculty staff and special contributions made by the librarians, statisticians, computer specialists, research fellows, research institutions, etc. It should include any financial support offered to the researcher by governmental / non-governmental, local / international organizations or authorities, etc.

9. Abstract

9.1. The abstract should be written in one page, and not exceeding 250 words (can be extended to 300 words in PhD theses). At the foot of the page the researcher should provide five key words from PubMed's MeSH (Medical Subject Headings) database. Available from <https://www.nlm.nih.gov/hmd/collections/digital/MeSH/mesh.html>

It should contain no references or abbreviations.

9.2. It should be written as a structured abstract, usually has four subheadings as follows:

9.2.1. Background and objectives:

It includes a concise definition of the problem, a background for the study, and the objectives of the study.

9.2.2. Methods:

It includes study design and setting, basic procedures, selection of study subjects and controls or laboratory animals, experiments, observational and analytical methods.

9.2.3. Results:

It includes the main findings (giving specific data and their statistical significance, etc).

9.2.4. Conclusion:

It includes principal conclusions (emphasizing new and important aspects of the study) and implications.

10. Table of contents

It should include at least headings for all chapters, and titles for sections, first level sub-sections / sub-headings, and appendices with their corresponding page numbers aligned at the right hand side of the page.

11. List of tables / figures

These should include the table / figure numbers with their titles and their corresponding page numbers aligned at the right hand side of the page, as with the table of contents.

12. List of abbreviations

The nomenclature includes all abbreviations and acronyms found in the thesis that the researcher uses frequently and does not define at each usage. These should be listed in alphabetical order, using only standard abbreviations. The first time an expression is used in the text, the full form followed by the abbreviation in parenthesis should be given.

13. Introduction

13.1. The introduction should provide:

13.1.1. A brief overview of the problem tackled by the researcher with up-to-date background information to allow the reader to understand the context, referring only to strictly pertinent references with no extensive review of the subject. Hence, the researcher *should not* include details of the data or conclusions from the work referred to.

13.1.2. A justification statement (rationale). The candidate should give evidence coupled with reasoning that the specific research work arises out of needs and that it could fill in gaps in knowledge or add to substantive or theoretical understanding. The justification should be phrased in a way or another to answer the questions *why* the research needs to be done, and *what* will be its significance.

13.1.3. Aims and objectives of the study. **Aim** indicates the general intention(s) of the research, written in a broad statement, i.e. the ultimate overall purpose of the study. It is what the researcher want to know or the point of doing the research. For example to find out ways to improve the breast care services in Iraq. **Objectives** are specific statements, which address the more immediate measurable outcomes, i.e. what steps the researcher will take to achieve the desired outcomes. Therefore, they should be attainable either at the end of research or in near future. Objectives are often presented in a formatted list, preferably with a separate "subheading". Generally, a research should have no more than two or three aim statements; one clear strong aim is usually enough, while it may include a sufficient number of objectives to achieve those aims. There is no need to write too many objectives or over ambitious objectives that can not be adequately achieved by the research. Usually no more than five objectives are enough.

- 13.1.4. Research questions (research hypothesis where applicable).
Sorting the aims and objectives in a clear and concise way is crucial in writing the research questions and in planning the research project and underpin the research design.
- 13.2. The number of the pages of the introduction is around three pages.

14. Chapters of the thesis

14.1. General considerations

- 14.1.1. The title of the chapter should be written in upper case letters.
Each chapter should be assigned a number, e.g. Chapter 1. LITERATURE REVIEW.
- 14.1.2. The title of the sub-section should have the first letter in upper case. Each sub-section of a chapter should be given a numerical index, e.g. the first section of chapter 1 is written as 1.1. . Further subsection / subheading of the above is written as 1.1.1. The numerical index for the next section will be 1.2. and for further subsection as 1.2.1. , e.g. 1.1. Epidemiology of hepatitis. *The researcher should avoid having more than 3 levels as this will make the text messy.* If further subsections are needed, these are better labeled by letters as A, B, C...
- 14.1.3. The font size of the subsection title is preferably different from that of the chapter heading and the text.
- 14.1.4. If the researcher is referring to a particular chapter in his thesis, here, only the letter – c – is capitalized, e.g. Chapter two provides an overview of The same thing is applicable when referring to a section (the letter - s - is capitalized, e.g. Section 1.2.2. provides

14.2. Chapter 1: Literature review

- 14.2.1. The literature review should be up to date including review of most relevant research works that have been done on the subject. If for example the researcher is reviewing studies on the *prevalence* of hypertension, no purpose is served by discussing the physiology of blood pressure regulation, except for adding bulk to the thesis. There should be an emphasis on recent and regional or local studies. Current literature and papers published in the last five years should form the major part of the review.
- 14.2.2. Literature review should not be a compendium of all the references available or just a quotation of the contents of the published studies. Instead it should be a *critical synthesis*, which comes only from a thorough study of the literature and a reflection. It should be a critical assessment and evaluation (not simply a summary) of researches addressing a focused problem. The researcher has to incorporate, whenever possible, his own ideas and comments on the studies, which will demonstrate his deeper understanding of the topic.
- 14.2.3. To make the review more meaningful it is better to be written chronologically bringing out the progress in the field over the years and it is a good idea to include the *place* of the studies.
- 14.2.4. There is no need to discuss every individual study in depth; only specific studies which are considered "landmark" studies in the worker's area of research should be discussed. In fact, it is better to write a more meaningful and informative sentence followed by a bunch of references on which the sentence is based. Relevant articles by researchers who are likely to be examiners of the student should be included.
- 14.2.5. For certain types of studies, a *table* may be the ideal format for synthesis of information. A few columns may summarize what was done and what was found, and the last column gives the

relevant references. Controversies may also be summarized in tables, categorizing studies in terms of their results, giving possible reasons for the conflicting results obtained. This type of review takes more time but less space, and conveys more information in a form that is easier to grasp.

- 14.2.6. The contents of this chapter should be divided into logical segments using sections / headings, subsections / subheadings, e.g. definitions of terms and concepts, historical background, anatomy, physiology, epidemiological and / or clinical aspects, diagnostic and laboratory techniques etc, as relevant to the area of research, insuring a thorough description of the subject and a smooth flow of contents to make the chapter more readable.
- 14.2.7. The size of this chapter should be around one quarter of the whole thesis; a long literature review can't add much to an otherwise weak thesis.
- 14.2.8. The number of references cited in this chapter depends on the topic. Under-referencing and over-referencing are equally undesirable.

14.3. Chapter 2: METHODS

14.3.1. This chapter can be entitled as:

- Materials and Methods: when the study included patients or subjects, experimental animals, clinical and laboratory work, etc.
- Patients and Methods: when the study was carried out on patients only.
- Subjects and Methods: when the study was carried out on healthy subjects only.

14.3.2. The method should include only information that was available at



the time the plan or protocol for the study was written;
all information obtained during the conduct of the study belongs to the Results chapter.

14.3.3. It should provide an in-depth description of the materials used by the researcher with discussion of the methods in sufficient detail to let other researchers to repeat the procedure (s).

14.3.4. The researcher should provide operational/working definitions of terms and concepts (cases, controls, exposure, etc) used in the thesis. Once established, the definition must be adhered to throughout the study.

14.3.5. This chapter should include:

- Full description of:
 1. Design of the study.
 2. Setting (place of the study area including description of a hospital).
 3. Time of the study.
 4. Selection of the observational or the experimental participants (patients, comparison group(s), laboratory animals, etc) including inclusion and exclusion criteria and description of the target (source) population, sampling method and sample size estimation, etc.
 5. Research ethics.
Generally a written approval of the *research ethics committee of the college* and an informed consent of the participants are required.
- Identification of the methods or procedures, instruments, equipments, kits (giving manufacturers' names and

addresses), design of the questionnaire and methods of data collection. Established methods or procedures should be described briefly; methods that have been published but not well known should be fully described, both with references. New or substantially modified methods should also be fully described. Established procedures are better included in the appendix.

- Precise identification of all drugs and chemicals by giving generic name (s), dose (s), and route (s) of administration (giving also manufacturers' names and addresses).
- Brief description of statistical methods used and the statistical significance of the findings (when appropriate) giving references to the statistical methods and defining statistical terms and abbreviations. Computer software used should be specified.

14.3.6. Detailed statistical analyses, questionnaires, some scoring systems, maps, etc are better provided in the appendix.

14.3.7. This chapter can also be divided into subsections/subheadings as appropriate.

14.4. Chapter 3: RESULTS

14.4.1. Results should be presented in logical sequence in the form of text, tables, and figures, giving the main or most important findings first, *but with no interpretation at all*. They should be broken into logical segments using subsections / subheadings as required.

14.4.2. The word "figure" is used for graphs, diagrams, charts, illustrations, sketches, photographs, etc. The abbreviation "Fig." may be used. Whatever the choice of the researcher, it should be consistent throughout the study. The letter – F – should always be written in upper case even if it is written between parentheses or when it appears in the middle of a

sentence, e.g. Figure 4 shows the mechanism of, The control mechanism scheme is shown in Fig 3.

- 14.4.3. The word "table" should be written without abbreviation, and the letter – T – should always be capitalized.
- 14.4.4. Data in tables or figures *should not be fully repeated in the text*; only important observations should be emphasized or summarized.
- 14.4.5. Numeric results should be presented as the absolute numbers and as derivatives (e.g., percentages, rates, etc). Statistical methods used to analyze the findings should be specified. Big tables should be avoided, except in the appendices. If the table turns out to be too big for an A4 size sheet, all efforts should be made to split it into two or more tables.
- 14.4.6. As a rule, tables are preferable to figures because they give numerical data. Figures are used to highlight the most significant results which might be otherwise lost in a maze of tables. Graphs or diagrams could make the reader rapidly appreciate the important features of the data. In fact, figures are best retained in the memory than tables. Duplication of information in tables and figures is not acceptable.
- 14.4.7. Tables and figures should be made as self-explanatory as possible, since many will be used directly in the presentation. Statistical measures of variations and tests of significance with significance values should be included in the table.
- 14.4.8. Tables and figures should be numbered consecutively in the order of their first citation in the text, and they should have a brief informative title or legend. Another type of numerical index for both tables and figures can be used, referring to the chapter number before the table or figure number, e.g. Table 2.4. , where 2 refers to the chapter number, and 4 to the table number.

- 14.4.9. Title of the table is written *above* the table while legend of the figure is written *below*.
- 14.4.10. In tables, each column and each row should have a short or abbreviated heading with statement of the units of measurement, if applicable. There should be *no internal horizontal or vertical lines*. Explanatory matter for abbreviated headings should be written in footnotes.
- 14.4.11. Both tables and figures should appear in the text after they are *first mentioned*. Appending them at the end of the chapter in which they are cited makes the research unpleasant for reading.
- 14.4.12. The raw data may be given as an appendix.

14.5. Chapter 4: DISCUSSION

- 14.5.1. Discussion is a critique on *what was done* and *what was found*. It may start with concise restatement of the study's purpose and the answers which the study has given.
- 14.5.2. This should be followed by discussion of the research design, including its unique features, why it was chosen, its pitfalls and limitations, and the justification for adopting it in spite of the limitations. Depending on the nature of the study a similar critical account may be written up for other aspects of methodology such as selection of participants, analytic methods and statistical tools used. Any significantly innovated or improvised procedure or technique may be pointed out.
- 14.5.3. Next, the new and principal findings of the study should be restated briefly and interpreted thoroughly discussing their generalizability in light of the available evidence. There is no need for a detailed repetition of the data given in the results. The findings should be compared with those reported in previous similar studies giving the possible mechanisms for the

findings and explanations for discrepancies (when they did not match that of others) taking into consideration limitations of the study and their contribution to the results.

- 14.5.4. Finally the contribution made by the study to scientific knowledge should be mentioned briefly. Other points included in the discussion are: the potential implications of the study, its limitations, strengths and the reasons for the limitations and weaknesses; areas of ignorance still left; and the new questions emerging from the study and hence suggestions for further research. It is also *possible* to state the limitations of the study in details in a separate subheading at the end of the discussion.
- 14.5.5. The flow of ideas in this chapter should follow the sequence of the objectives and results.
- 14.5.6. This chapter could also be broken up into logical segments by subsections / subheadings as appropriate. It should be rich in references to similar works and background information to interpret the results.

14.6. Chapter 5: CONCLUSIONS AND RECOMMENDATIONS

- 14.6.1. This chapter should include summary of new observations, new interpretations, and new insights that have resulted from this work. Often, the researcher uses this chapter to merely restate the research findings. He should write real conclusions and implications, making the reader understand *what the findings mean and what are the key ideas that can be drawn from the study*.
- 14.6.2. Conclusions should also be linked with the objectives of the study, avoiding unqualified statements and conclusions not adequately supported by the findings.
- 14.6.3. Similarly, recommendations should emanate from the candidate experience in conducting the research and from the study findings stating gaps not covered by the work or

unanswered questions requiring investigation, and those discovered during the conduct of the study.

- 14.6.4. Recommendations should include exploration of the practical, applied, and clinical implications of the findings. The possibility of how this work can be improved by future research and what needs to be done should also be clearly addressed. Recommendations should therefore, include suggestions for further research.
- 14.6.5. Both conclusions and recommendations should be written starting with the most important points in descending order of importance, which may be enumerated for clarity.

15. References

15.1. General considerations:

- 15.1.1. Including references in the work will show the range of reading the researcher has done. Without full references, the candidate could be accused of plagiarism. Plagiarism is a serious offence of academic misconduct. The researcher should be aware of avoiding plagiarism and the specific guidelines and disciplinary measures of the HMU in this regard.
- 15.1.2. References should be formatted in the Harvard style (Author-Date method).
- 15.1.3. The best references to cite are original articles published in journals indexed by PubMed or other comparable databases. Unpublished observations, personal communications, and even theses or dissertations are not good references. They should be cited only when the information they provide is both vital and not available in more accessible sources.
- 15.1.4. Review articles do not always reflect original work accurately, although they can be an efficient way of guiding research students and readers to a body of literature.

Therefore, candidates should refer to original research sources, whenever possible.

- 15.1.5. In case of using abstracts, the article title is followed by the word abstract in square brackets [abstract].
- 15.1.6. References to papers accepted but not yet published should be designated as "In press" after the article title.
- 15.1.7. Information from manuscripts submitted for publication but not accepted should be cited in the text as "Unpublished observations".
- 15.1.8. "Personal communication" may be cited in the text in which case name of the person, date of communication, place of work or affiliation, and country should be cited in parentheses in the text, e.g. (Jameson LI, personal communication, 7th of Aug. 2002, School of Population Health, USA).
- 15.1.9. Type of the article may be indicated after the title of the article in square brackets [letter, editorial], as relevant.
- 15.1.10. References should be written in the same style and format that *is consistent throughout the thesis*.
- 15.1.11. All statements, opinions, and conclusions, taken from another writer's work should be cited, whether the work is directly quoted, paraphrased or summarized. Quotations may be included in the text in quotation marks.
- 15.1.12. Tables and figures should be referenced if they have been taken from a published work.
- 15.1.13. References in the *reference list* should be identified in sufficient detail, so that others may locate and consult references cited.
 - All authors should be listed when there are six or less. When they are more than six, only the first six authors are listed followed by *et al.*

- Names of authors should be listed in the order that appear in the article.
- The surname of each author should be followed by his INITIALS. First names and middle names are converted to initials (if not already converted) for a maximum of two initials.
- Only the first word of a journal article or a book title (and words that normally begin with a capital letter) should begin with a capital letter.

15.1.14. References should be verified against the original document to avoid or minimize citation errors.

15.1.15. Journals frequently change titles over time. The journal title that was used at the time of publication should be cited, e.g. the British Medical Journal officially changed title to BMJ in 1988. Therefore, journals from 1987 and earlier are cited as Br Med J, not as BMJ.

15.1.16. The title of a journal article should be entered as it appears in the publication. A colon is used to separate a title from subtitle, unless some other form of punctuation (such as question mark, period, or an exclamation point) is already present.

15.1.17. The title of journal is either fully written, or abbreviated according to the PubMed style. A list of journals indexed for MEDLINE is published annually, as a separate publication by the National Library of Medicine (NLM). The list can also be obtained through the NLM web site (<http://www.nlm.nih.gov/tsd/serials/lji.html>) and (http://www.nlm.nih.gov/bsd/lstrc/new_titles.html). No punctuation marks are used in the abbreviated journal title. The title of non-indexed journals is preferably fully written or written as it appears in the journal. Book titles are not abbreviated.

- 15.1.18. The use of italic or bold letters to indicate parts of a journal article should be avoided unless indicated.
- 15.1.19. For place of publication (of books, conference proceedings, etc), *the city should be given*.
- If more than one city is listed, the first one or the location of the publishers head office should be given.
 - If the city is not well known, the country, region or state may be added in parentheses.
 - Where the publisher is a university and the place of publication is included in the name of the university, there is no need to include the place of publication.
- 15.1.20. The basic rules for citing electronic references don't differ markedly from those of print documents.
- Electronic sources include software and Internet sources such as Internet journal articles or books, databases, and web sites.
 - Citation of an Internet document should include all elements of citation of print documents. Simply adding the Uniform Resource Locator (URL), Digital Object Identifier (DOI), or another electronic address to a title is not sufficient.
 - Electronic sources may not always contain clear author, publisher details or even a title. If no author is given, the title is used as the first element of a citation. If neither author nor title is available, the URL is used.
 - The date of update/revision (if available) and date of citation of information are added in square brackets. Date of citation should include the year, month, and day in that order, such as 2006 May 5.
 - The availability should begin with the phrase "Available from" followed by a colon then the entire URL is added i.e. the http:// www or other beginning components should not be omitted. The URL is underlined.

- Web citation should be used only when the web sites are very useful and authoritative. However, it is not advised to use web-citation where the researcher could reasonably use a print source.

15.2. In-text referencing in the Harvard style (modified Harvard style):

- 15.2.1. References in the text are referred to by giving the author (s) surname (*no initials at all*) and the year of publication.
- 15.2.2. Surname of an author or two authors (of an article or a publication) should be fully written followed by year of publication.
- 15.2.3. In case of more than two authors, the surname of the first author is written only followed by et al (et al means "and others") and year of publication.
- 15.2.4. If the author's name occurs naturally in the sentence or the sentence starts by the author's name, the year is given in parentheses, e.g.
 In a popular study, Harvey (1995) argued that.....
 Clanliffe *et al* (1997) found that.....
 Matthews and Jones (1997) found that
- 15.2.5. If, however, the author's name does not occur naturally in the sentence or the statement (whether throughout or at the end of the sentence, as applicable), both name and year are given in parentheses e.g.
 A recent study (Johnson, 2007) shows that
 Theory rises out of practice and once validated it is used to explain the practice (Stevens, 1998).
- 15.2.6. If more than one reference is cited after the sentence or statement they should be arranged in chronological order (oldest source first) in parentheses e.g. (Rea et al, 1976; Johnson, 1978; Dalgaard et al, 2003)

- 15.2.7. When an author has published more than one cited document in the same year, these are distinguished by adding lower case letters (a, b, c, etc) after the year, e.g. Johnson (1994 a) reported that ...
 A recent study (Rea et al, 1977 a) revealed that.....
- 15.2.8. If the work is anonymous (i.e. no author is given), then the word "Anon." should be used, e.g.
 In a recent article (Anon., 1999) it was found that
 Internet resources should be treated slightly different. If the researcher is citing a web page in the text he should cite by title.
 If neither author nor title is available, the URL is used, e.g.
 The latest study (<http://www.....>, 2006) revealed....
- 15.2.9. For certain kinds of work, e.g. dictionaries or encyclopedias or if an item is the cooperative work of many individuals, none of them have a dominant role e.g. videos or films, the title may be used instead of the author.
- 15.2.10. If the exact year is not known, an approximate date preceded by "ca" or "c" may be supplied and given in square brackets, e.g. [c1970]. If no such approximation is possible "no date" is added in square brackets [no date] or [n.d.].
- 15.2.11. If a reference is made to a source quoted in another source, both should be cited in the text, e.g. A study by Smith (1960 cited in Jones,1994) showed that
 In the reference list at the end of the study, only the work read by the researcher should be listed i.e. Jones in the above example.
- 15.2.12. If a reference is made to a contribution (a chapter in a book or an article in conference proceedings), only the contributor (s) surname is cited.

15.3. Reference list in the Harvard style (modified Harvard style).

- 15.3.1. The references are listed in alphabetical order of the first author's surname (*no need to give a numeral for the reference*).
- 15.3.2. The year of publication of the study should follow the author's INITIALS in parentheses after the last author INITIALS.
- 15.3.3. Author/editor surnames with their initials are separated from each other by a comma and a space. In journals, volume and issue numbers of the journal and page numbers of the article are given but not labeled. There is no need for repetition of unnecessary digits of the page numbers. A semi-colon follows the journal title and a colon follows the volume number (issue number).
- 15.3.4. The second line of the reference should start under the fifth letter of the first line. The hanging indent for each reference makes the sequence more obvious. e.g.
Benge RC (1979). Cultural crisis and libraries in the
third
word. London: Clive Bingly.
- 15.3.5. If more than one article or publication has been published by the same author (s) at different years, they should be listed chronologically (earliest first).
- 15.3.6. If more than one article or publication has been published by the same author (s) during a specific year, they should be listed by lower case letters after the year. e.g. WHO (1993a), WHO (1993b), WHO (1993c), etc.
- 15.3.7. If no author is given, the word Anon. is written followed by the year. The title of the article or the URL may be used as the first element of the citation in Internet resources (see 15.2.8).

15.4. Examples of citing references in the Harvard style:

References should have the elements and punctuation given in the examples of different types of published work and electronic references, shown below:

15.4.1. Reference to a journal article:

- Halpern SD, Ubel PA, Caplan AL (2002). Solid organ transplantation in HIV- infected patients. *New Engl J Med*; 347 (4): 284-7.
- Forooghian F, Yeh S, Faia LJ, Nussenblat RB (2009 Feb). Uveitic foveal atrophy: clinical features and associations. *Arch Ophthalmol*; 127 (2): 179-86.
- The cardiac society of Australia and New Zealand (1996). Clinical exercise testing. *Med J Aust*; 164: 282-4.
- Clauster TA (2002). Integrating clinical trial data into clinical practice. *Neurology*; 58 (12 Suppl 2): S 6-12.
- Abend SM, Kulish N (2002). The psychoanalytic method from an epistemological viewpoint. *Int J Psychoanal*; 83 (Pt 2): 491-5.

15.4.2. Reference to a book with personal author (s):

Fletcher RH, Fletcher SW, Wagner EH (1988). *Clinical epidemiology, the essentials*. 2nd ed. Baltimore: Williams and Wilkins. P. 145-60.

15.4.3. Reference to a book with editor (s):

Gilstrap LC, Cunningham FG, Van Dorster JP, editors (2002). *Operative obstetrics*. 2nd ed. New York: McGraw-Hill. P. 160-8.

15.4.4. Reference to a chapter in a book:

Silverman RA (1992). Pediatric mycosis. In: Elewska B, editor.

Cutaneous fungal infection. 3rd ed. New York: Igaku Shoin. P.212-28.

15.4.5. Reference to conference proceedings:

Harnden P, Joffe JK, Jones P, editors (2002). Germ cell tumors V. Proceedings of the 5th germ cell tumor conference, 13-

15 ep 2001, Leeds, UK. New York: Springer.

15.4.6. Reference to a conference paper:

Silver K (1991). Electronic mail: the new way to communicate. In:

Roitt DI, editor. 9th international online information meeting, 3-5

Dec1990, London, UK. Oxford: Learned information. P. 323-30.

15.4.7. Reference to a dissertation or thesis:

- Yahia MM (1980). Studies on dermophytes in Mosul and vicinity.

M.Sc. thesis. University of Mosul, College of Medicine (optional).

Iraq.

- Al-Tawil NG (1997). Knowledge, attitudes and practices regarding

family planning among two groups of women in Baghdad.

FIBMS dissertation. Iraqi Board for Medical Specializations,

Scientific Council of Community and Family Medicine (optional).

Iraq.

- 15.4.8. Reference to a publication (manual, report) from a corporate body:
UNICEF (2002). The situation of children in Iraq. An assessment based on United Nations convention on rights of children. Geneva: UNICEF.
- 15.4.9. Reference to an article not in English:
Al-Diwan JA (1990). [Cigarette smoking among secondary school male students in Athawra city of Baghdad]. Iraqi J Comm Med; 3(1): 23-8. Arabic.
- 15.4.10. Reference to a dictionary:
Dorland's illustrated medical dictionary (2000). 29th ed. Philadelphia: W.B Saunders; 2000. Filamin, P. 675.
- 15.4.11. Reference to an encyclopedia :
De Quervain's tenosynovitis (1998). In: Stellman JM, editor. Encyclopedia of occupational health and safety. Vol. I. 4th ed. Geneva: International labour office. P.623
- 15.4.12. Reference to a newspaper article:
Tynan T (2002 Aug 12). Medical improvements lower homicide rate: Study sees drop in assault rate. The Washington Post; Sect. A; 2 (col. 4-6).
- 15.4.13. Reference to a book on Internet:
- Richardson M L (2000). Approaches to differential diagnosis in musculoskeletal imaging. Version 2.0. Seattle (WA): University of

Washington School of Medicine; [revised 2001 Oct 1; cited 2006

Nov1]. Available from:

<http://www.rad.washington.edu/mskbook/index.html>.

- Foley K M, Gelband H, editors (2001). Improving palliative care for cancer. Washington: National Academy Press; [cited 2002 Jul 9].

Available from:
<http://www.nap.edu/books/0309074029/html/>.

- Moore A, Moore J, Fowler S (2005). Faculty development for the net

generation. In: Oblinger D G, Oblinger J L, editors. Educating the

net generation [Internet]. Boulder (CO): EDUCAUSE; [updated

2006 Jun 15; cited 2006 Nov 17]. [about 9 pages]. Available

from:

<http://www.educause.edu/FacultyDevelopmentfortheNetGeneration/6071>.

15.4.14. Reference to a journal article with page numbers on Internet:

- Harrison J J, Ceri H., Yerly J, Stremick CA, Hu Y, Martinuzzi R, et al

(2006). The use of microscopy and three-dimensional visualization to evaluate the structure of microbial biofilms

cultivated in the Calgary Biofilm Device. Biol Proc Online [cited 2007 Jan 8]; 8(1): 194-215. Available from:

<http://www.biologicalprocedures.com/bpo/arts/1/127/m127.pdf>.

DOI: 10.1251/bpo127

- Polgreen P M, Diekema D J, Vandenberg J, Wiblin R T, Chen Y Y, David S, *et al* (2006). Risk factors for groin wound infection after femoral artery catheterization: a case-control study. *Infect Control Hosp Epidemiol* [cited 2007 Jan 5]; 27(1): 34-7. Available from: <http://www.journals.uchicago.edu/ICHE/journal/issues/v27n1/2004069/2004069.web.pdf>

15.4.15. Reference to an article with a numbering (scheme in place of pagination) on Internet:

Boutin-Foster C (2005). In spite of good intentions: patients' perspectives on problematic social support interactions. *Health Qual Life Outcomes*. [cited 2007 Jan 5]; 3(1): 52. Available from:

<http://www.hqlo.com/content/3/1/52>.

15.4.16. Reference to an article which expresses pagination as paragraphs on Internet:

Bertino E, Milani S, Fabris C, De Curtis M (2007). Neonatal anthropometric charts: what they are, what they are not. *Arch Dis Child (Fetal Neonatal Ed)* [cited 2007 Jan 9]; 92(1): [12

paragraphs]. Available from:

<http://fn.bmj.com/cgi/content/full/92/1/F7>.

15.4.17. Reference to an article with a numbering scheme (in place of volume and issue number of the journal) on Internet:

Aoki TT, Grecu EO, Arcangeli MA, Meisenheimer R (1995). *Effect*

of intensive insulin therapy on abnormal circadian blood pressure pattern in patients with type I diabetes mellitus.

Online

J Curr Clin Trials [cited 2007 Jan 4]. Doc No 199 [about 10 screens]. Available from: <http://www.oclc.org/firstsearch/>.

15.4.18. Reference to an article without standard volume, issue or article number on Internet:

O'Neill M, Dupere S (2005). Health promotion: the next generations.

Rev Health Promot Educ Online [cited 2007 Jan 10]; [10 paragraphs]. Available from:

<http://www.rhpeo.org/reviews/2005/10/index.htm>.

15.4.19. Reference to an open serial database on Internet:

Online Archive of American Folk Medicine (1996-). Los Angeles:

Regents of the University of California [cited 2007 Feb 1].

Available from: <http://www.folkmed.ucla.edu/>.

15.4.20. Reference to a closed serial database on Internet:

EARSS (2001-2005): the European Antimicrobial Resistance

Surveillance System. Bilthoven (Netherlands): RIVM

[cited 2007 Feb 1]. Available from:

<http://www.rivm.nl/earss/>.

15.4.21. Reference to a single database on Internet:

Jablonski S (2001). Online Multiple Congenital Anomaly/Mental

Retardation (MCA/MR) Syndromes. Bethesda (MD): National

Library of Medicine (US), Medical Subjects Headings
Section;
[updated 2001 Nov 20; cited 2002 Aug 12]. Available

from: http://www.nlm.nih.gov/mesh/jablonski/syndrome_title.html

15.4.22. Reference to a retrieval system on Internet:

DialogWeb (c1997-). Version 2.5. Cary (NC): The Dialog
Corporation. [cited 2007 Feb 1]. Available from:
<http://www.dialogweb.com/>.

15.4.23. Reference to parts of database on Internet:

- Online Archive of American Folk Medicine (1996-). [Internet]
Los Angeles: Regents of the University of California. Record
No.

1928, Cataracts, [cited 2007 Feb 27], [about 1 screen].
Available

from:

http://www.folkmed.ucla.edu/FMDetail.cfm?UID=1_928

- MeSH Browser (2002-). Bethesda (MD): National
Library of
Medicine (US); [cited 2003 Jun 10]. Meta-
analysis,
unique ID: D015201, [about 3 pages]. Available

from: <http://www.nlm.nih.gov/mesh/MBrowser.html> Files

updated weekly.

15.4.24. Reference to a contribution to a database on Internet:

Frank CD, Adler DG (2006). Post-ERCP pancreatitis and its

prevention. Nat Clin Pract Gastroenterol Hepatol [cited 2007 Mar 9]; 3(12): 680-8. In: PubMed 1950. Bethesda (MD): National Library of Medicine (US). [about 1 screen].

Available

from:

http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=17130878&query_hl=2&itool=pubmed_docsum PMID: 17130878.

Reference to a homepage on Internet:

Hooper JF (1999 Jan1). Psychiatry & the Law: Forensic Psychiatric

Resource Page. Tuscaloosa (AL): University of Alabama,

Department of Psychiatry and Neurology; [updated 2006 Jul 8,

cited 2007 Feb 23]. Available from:

<http://bama.ua.edu/~jhooper/>.

15.4.25. Reference to a part of a website on Internet:

AMA (2007 Mar 26): helping doctors help patients. Chicago: American Medical Association; 1995-2007. AMA launches exclusive partnership with the ReachMD Channel for medical professionals [cited 2007 Mar 28]; [about 2 screens]. Available from: <http://www.amaassn.org/ama/pub/category/17469.html>

15.4.26. Reference to books or other individual titles on audiovisual materials (CD-ROM, DVD):

- Anderson SC, Poulsen KB (c2002). Anderson's electronic atlas of hematology [CD-ROM]. 2nd version. Philadelphia:

Lippincott Williams & Wilkins; 1 CD-ROM: color, 4 3/4 in.

- Rubenstein E (1990), editor. Scientific American medicine consult [CD-ROM]. Version 2.5a. New York: Scientific American Inc; [updated 1990 Sep]. 1 CD-ROM: color, 4 3/4 in.

15.4.27. Reference to personal communication through e-mail.

Johnson DS (2000 Apr 4). (johnsonad@yahoo.com). Re: Ischemic heart disease. e-mail to Cross, P (pcross@bournemouth.ac.uk).

16. Appendices

This section contains those parts of the thesis (methods or procedures, pictures, diagrams, maps, questionnaires, detailed statistical analyses, etc) that are either well known or do not contribute directly to the main text but need to be included for completion. The aim of doing this is not to break up the flow of information or bore the reader when reading the text.

Appendix I



**SMALL GROUP TEACHING IN HAWLER
COLLEGE OF
MEDICINE: CHALLENGES AND OPPORTUNITIES
FROM TEACHERS AND STUDENTS
PERSPECTIVES**

A THESIS SUBMITTED TO THE COUNCIL OF THE COLLEGE
OF MEDICINE AT HAWLER MEDICAL UNIVERSITY IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF DOCTOR OF PHILOSOPHY
IN COMMUNITY MEDICINE

BY
ABUBAKIR MAJEED SALEH
M.B.Ch.B, M.Sc.
DEPARTMENT OF COMMUNITY MEDICINE

SUPERVISOR
PROFESSOR NAMIR G. AL-TAWIL
M.B.Ch.B, DCM, F.I.C.M.S./C.M.

APRIL
2013 AD

NAWROZ
2713 K

JUMADI (II)
1434 AH