Chapter 6: Writing a thesis

1-Definition of the thesis: It is a scientific document prepared according to specific rules (theoretical, methodological, and practical) that marks the culmination of years of study and enables the student to obtain a degree.

2-What do we need to write a thesis?

• Planning and time management skills

• Critical reading skills

• Academic writing skills

• Internet searching skills

• Resources classification

• Referencing skills

• Data analysis skills

• Software's skills (e.g. word, excel, origin etc.)

3-Usual Thesis structure

a-The Cover Page (Mandatory)

The cover page must include the following information:

- The name of the affiliated university, institute, faculty, and department.
- The statement "Thesis/Dissertation for the Degree of Bachelor's/Master's/Doctorate in: (Specialty), the title of the thesis/dissertation.
- The student's full name with the mention "Presented by:"
- The mention in front of the jury: indicating the names and academic titles of each jury member in the following order: chairperson, supervisor, and examiners.
- At the bottom, the defense date or the month and year of the academic year.

b- Abstract

• The abstract is the hardest part of the thesis to write and most readers of the thesis will read it first

• The abstract conveys the most important messages regarding your project, such as: what you set out to do? How did you do it? What results were obtained?

A good abstract has to:

• Be precise and honest

• Stand alone

• Use no technical jargon

• Be brief and specific

• Minimize the use of abbreviations

• Cite no references

C- Acknowledgements

Writing a thesis or dissertation requires a lot of energy, motivation, and conviction. However, a thesis or dissertation is not always done "alone." It is customary to express gratitude to the people around you who have contributed, directly or indirectly, to the thesis or dissertation. Of course, acknowledgments are optional. They typically serve as a token of appreciation for loved ones and the thesis or dissertation supervisor. Students who wish to emphasize this can do so simply and effectively in one or two paragraphs on a separate page, just before the table of contents.

As for the dedication, which is also written before the table of contents, it represents a tribute to one or more individuals who are of great significance to the candidate. It is also, of course, optional.

D- Tables of contents, list of tables and graphs

E- Introduction chapter

- Introduce the reader to the particular problem your project is attempting to solve.
- Most projects have multiple objectives. it is a good idea to state these in a numbered list.

Generally, the introduction chapter should contain:

• Background for the work

• The importance and significance of the work

• Include brief descriptions of the development process, design, implementation, and testing approaches

• Provide a synopsis of what the other chapters contain

• By the time the reader has finished reading the Introduction s/he should have a clear understanding of the problem you set out to address and how it has been solved

F- Background & literature review Chapter

This chapter is mandatory

• It focuses on issues that are more specifically related to the work in your project.

• Describe similar work done by others in the past in the literature.

• Proof that you have done a literature search and completed a critical analysis

of the relevant literature describing prior work in the field.

• Demonstrate this by writing some discussions on what others have done,

what they have achieved, and limitations of their work.

• Do not copy and paste text from the literature; paraphrase the contents inyour own words.

G- Research Methodology

-Describing the materials used in your research project

-Explaining how the materials were prepared

-Describing the techniques that you used

-Explaining how measurements were made and what calculations were performed

-Explaining how the setup was calibrated and the limitation of your method

H-Results and Discussions chapters

• Use figures and tables to summarize data

• Comment on the results obtained

• Interpret what the results mean

• Identify any sources of error in your measurements

• Explain any results which are unexpected

• Define the limitations of the method

I- Conclusion

• Summarize the problem you set out to solve, describe what you have achieved, and prospect for future work

• Refer back to the problems you encountered and how you overcame those, or found workarounds.

• the conclusion section should not contain detailed descriptions of the problems or the solutions

• Address how you have met the original objectives of the project (i.e. proposal contents)

• Discuss potential future work

J-Appendices (if needed)

Use Appendix to present material that will interrupt the flow if included in the main part of the thesis.

k- References

-Use either Harvard referencing style or Vancouver Style BUT not BOTH

• Learn how to Use Endnote referencing software

• Learning Endnote will save your efforts and time

4 -Post writing

Here are the various elements of this final step:

- Selection of the final title
- Formatting of the thesis
- Review and correction of the document
- How to print the thesis
- Preparation for the thesis defense

5- Prepare and Succeed in Your Thesis Defense

After writing and printing your thesis, the next step is its oral presentation.

1- **What a Thesis Defense Is Not:**

- A summary of the work
- A presentation of the theoretical and methodological details
- A reading of the thesis

2- **What a Thesis Defense Is:**

-A presentation of the entire work

- A lively and concise explanation (around 20 minutes) of:

-The research context

-The motivation for the research

-The methodology

-The main results

-Conclusions and future perspectives