GUIDE ON THESIS WRITING/PRESENTATION

FACULTY OF ENGINEERING

UNIVERSITY OF BENIN

By

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The following document is a guide to thesis writing in the Faculty of Engineering based on the outcome of the constituted committee on the 'Harmonization of PhD Seminars/Thesis Presentation Format' in the Faculty.

WHY WRITE A THESIS?

- To get a PhD
- To document and communicate your results
- To develop writing skills.

STRUCTURE OF THESIS REPORT

The structure of the report should be as follows:

- Cover page
- Title page
- Certification page
- Certification of Thesis/Dissertation on Plagiarism page
- Dedication page
- Acknowledgement page
- Abstract page
- Table of Contents page
- Chapter One - Introduction
- Chapter Two - Literature Review
- Chapter Three - Methodology
- Chapter Four - Results and Discussion
- Chapter Five - Conclusion and Recommendations
- References
- Appendices

In conclusion, further tips on writing and PowerPoint presentation are included.

COVER PAGE

ANALYSIS OF THE VARIOUS TECHNIQUES USED IN ENGINEERING DESIGN

BY

BLESSED KINGSKID
MAT. NO. PG/ENG140000

DEPARTMENT OF .... ENGINEERING

FACULTY OF ENGINEERING

UNIVERSITY OF BENIN

NIGERIA

NOVEMBER, 2014

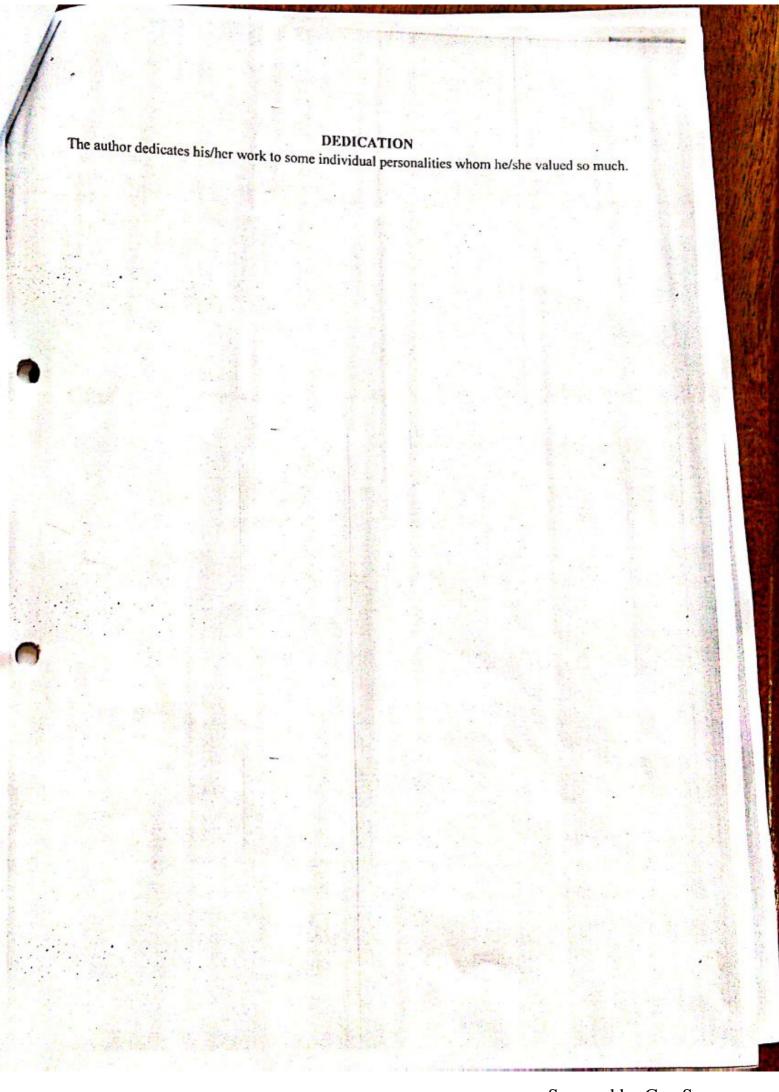# ANALYSIS OF THE VARIOUS TECHNIQUES USED IN ENGINEERING DESIGN

BY

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A THESIS IN THE DEPARTMENT OF .... ENGINEERING, SUBMITTED TO THE POSTGRADUATE SCHOOL IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF DOCTOR OF PHILOSOPHY IN ENGINEERING, UNIVERSITY OF BENIN, NIGERIA

NOVEMBER, 2014

CERTIFICATION PAGE

This is to certify that this study was carried out by Blessed Kingskid in the Department of
.... Engineering, University of Benin, Nigeria.

....
Supervisor   Date

....
Co-Supervisor (if any)   Date

....
Head of Department   Date

CERTIFICATION OF THESIS/DISSERTATION ON PLAGIARISM

We the undersigned attest and declare that the thesis of Mr/Mrs/Miss ....
titled ....
has successfully passed the anti-plagiarism test and does not violate any copyright regulations.

....
Name of Chief Supervisor/ Sign & Date   Name of Co-Supervisor/ Sign & Date (if any)

....
Name of Head of Department/ Sign & Date

DEDICATION

The author dedicates his/her work to some individual personalities whom he/she valued so much.

ACKNOWLEDGEMENT

The student uses this part of the report to show gratitude for the support he/she received from individuals or groups while conducting his/her research/study. Acknowledgement needs to be brief and written in the third person singular tense to reflect the deep feeling of the author to those recognised personalities.

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ABSTRACT

It is the resume of what the entire report contains. Essential ingredients of a good abstract include brevity with emphasis directed on the objectives of the work, research hypothesis, methodology and cogent findings emanating from the study. A highlight of conclusions drawn, and possible implications occasioned by necessary recommendations that will improve educational principle and practice.

It should contain three paragraphs namely: aim and purpose of the work, methodology and summary of results. It should contain a maximum of 500 words.

************MAIN BODY OF THE WORK STARTS HERE*************************

CHAPTER ONE
INTRODUCTION

Introduction serves as an orientation to the investigation. Its essential components include: the background of the study, statement of the problem, aim and objectives of the study, scope of the study, methodology, relevance of the study and outline of the thesis.

Background to the study: Here, readers are introduced to the work by the student which is his/her own organized thoughts and is supported with cogent references. He/She should build a case for his/her work here.

Statement of the problem: This involves what the student plans to investigate. It also includes goals of the study and also defines the problem. A good problem and problem statements have three criteria – the problem should be stated clearly and unambiguously in question form; it should express relationships between two or more variables and it should be testable in nature.

Aim and Objectives of the study: The Aim is statement of the things you want to achieve by the end of the work, while objectives should describe how you will get to your aim by listing the main stages you will need to undertake. In order words, objectives are steps that you need to carry out in order to reach your aim. The best way to set an objective is to look at your stated 'aim' and ask yourself, 'if I am going to achieve this aim, what will I have to do?'

Scope of the study: This is the boundary set for the study. It reflects the focus of the work to a manageable extent. It involves focusing on selected aspects of the problem and determining the level of sophistication.

Methodology: It is the systematic, theoretical analysis of the methods applied to the study.

Relevance of the study: This touches on the motivating factor, the need for investigation. In essence, why is the student carrying out the study? Of what use will the study be to the society? Or is it a follow up to an earlier study?

Outline of the thesis: Briefly outline what the other chapters are about excluding Chapter One.

CHAPTER TWO
LITERATURE REVIEW

This contains the theoretical framework for the study. It also includes a summary of the various views of other writers on the topic. The researcher looks out for ideas that will improve his/her work and valuable information on methods of carrying out the research. Sources are usually in educational journals, newspapers, magazines, books, past research projects and thesis.

In the literature review, one summarizes an earlier study in his/her own words and then injects ones personal comments where appropriate by way of appraisal. When all aspects emphasized in the problem are already reflected in the literature review, a summary or an appraisal of the entire literature used is made to conclude the review.

CHAPTER THREE
METHODOLOGY

This section is called the method of attack (Van Dalen, 1973) and the plan of attack (Arg, Jacobs and Razavieh, 1979) for the problem under investigation. Methodology refers to the general strategy and the logistics that are employed in the conduct of the study, and precisely in the gathering and analysing of the data needed for answering study hypotheses formulated to direct the study. In this section, experimental design is considered and in the words of Arg *et al.*, 1979 could be experimental and expost facto designs. Other designs include case studies, surveys etc. Methodology should be complete enough to allow experiments/studies to be reproduced and only new procedures should be described in detail. While previously published procedures should be cited and important modifications of published procedures should be mentioned briefly. Standard deviations must be quoted for each experimental technique and the number of analysis.

CHAPTER FOUR
RESULTS AND DISCUSSION

Presentation of data analyzed and the interpretation of findings are reported in this chapter and it consists of tables or picture or figures which help to present the results in detail. The presentation of major findings is done to relate to each problem of the study. Also, discussion on the findings, errors and weaknesses should be clearly stated. The results should be presented, followed immediately by its discussion. In results discussion, emphasis should be placed on result(s) presentation, result(s) tread or pattern and the possible correlation of the presented result(s) with other earlier reported by other researcher/students.

CHAPTER FIVE
CONCLUSION AND RECOMMENDATIONS

This section should include short and concise statements (summary) about the main findings/results of the study; it is sometimes useful to re-iterate initial objectives and put conclusions under each. A summary of the specific contributions of the report, including any shortcomings should be included. Also, future work should demonstrate that you can formulate new ideas for research.

************MAIN BODY OF THE WORK ENDS HERE************************

REFERENCES

References are closely tied to the literature review and must all be referred to in the report. They should be organised alphabetically by author surname and date. In text, where there are three or more authors, quote all the authors' surnames at first mentioned and thereafter, only the first author's name followed by *et al*. Where there are citations to more than one paper published by the same author(s) in one year, distinguish by the addition of small letters a, b, c etc. Where many authors are referred to, start with the oldest references e.g. (Orukpe, 1999; Aisien, 2003; Apeh, 2010).

APPENDICES

These include any necessary material that may impede the smooth presentation of the report. Examples include raw data, computer codes, large tables or figures, pictures/plates, maps, tedious or lengthy mathematical proofs, questionnaire, basic theory, sample calculations etc. They should be labelled and listed also in the table of contents.

OTHER USEFUL WRITING TIPS

- Do not annoy the examiners
- Write in 3rd person past tense -- no colloquialisms
- Use "spell check" before finally printing
- Paragraphs contain at least two sentences -- usually one idea.
- Sentences contain more than 5 - 6 words.
- Formatting is critical -- eg 18 point for chapter heads, sub-sections 14 – 16 point Bold etc.
- Length - try not to exceed 300 pages of text – this is more than enough in most cases.

"COMMUNICATE, COMMUNICATE"

POWERPOINT PRESENTATION

A simple basic way to plan a presentation is to think in terms of: a beginning, middle and end. Each of these sections has the following:

Beginning:
Introduce yourself
Maybe say why **you** are giving this talk
Possibly outline your objective
Introduce your subject – give the title of your talk
Give an overview of the presentation (this starts the 'sign-posting' process)
Make an impact!

Middle:
This is for the logical development of your material.
Headings and sub headings.
Illustrate your points and give *examples* of what you mean when you can.

Remember the life cycle of an audience and build in doze breakers!
All audiences are much more engaged with the beginning and end of presentations than they are with the middle. To make use of this we effectively add something to break up the pattern of the talk. Suddenly switching to a different medium; telling a personal story; giving an exercise; introducing another person; unveiling some apparatus (surely there is a very long list of possibilities) – can act like a beginning or an end and refocus the audience's attention.

End:
Thanks / acknowledgements
Summary of your message
'Take home message'

Before making your presentation, be well prepared and relaxed as this will help to ease anxiety.
However, your presentation should:

- Help to emphasise important points
- Help to pace material
- Be legible/clearly visible
- Add interest to the talk
- Allow adequate time for people to see

Main attributes of a good slide for presentation
Slides can be grouped into the following:

- Context
- Problem
- Solution
- Why your result is new

GOOD LUCK AND HAPPY WRITING AND PRESENTATION!