CAPSTONE PROJECTS MANUSCRIPT

For BSIT

Capstone Project General Format

The following are the parts of the study, optional and necessary, that must be followed and must appear in this order.

Title Page.

This page contains the title of the thesis, name of proponents and a statement regarding the qualification for which the thesis is submitted. It also contains the name of the institution, to which the thesis is being submitted, and the month and year of submission.

Approval Sheet.

This page bears the name of the proponent/s and title of the thesis, together with the signature of the adviser, college dean and members of the oral defense panel. This page certifies that the thesis has been duly approved, and must bear the date of approval.

Acknowledgements.

This section recognizes persons and organizations who/which assisted the proponents in the completion of the thesis. Acknowledgements should be expressed simply and tactfully.

Abstract.

This is a presentation of the thesis summary. Included in the thesis abstract are the statement of the problem, objective/s of the study, methodology, major findings, significance and conclusions. The abstract should not be less than 200 words but not to exceed 500 words, and should be typed single-spaced. Normally the abstract does not include any reference to the literature.

Table of Contents.

A sequential listing of all major parts of a thesis with corresponding page numbers. Included in the table of contents are the titles of chapters, sections and subsections, references and appendices. Also included are the titles of the preliminary pages as well as the required forms.

List of Tables.

A comprehensive listing of titles of all tables found in the body of the thesis with indication of the corresponding page numbers. Tables should be numbered in sequence, using Arabic numerals. For example, the third table appearing in chapter two should be labeled *Table 2.3.*

List of Figures.

List of charts, graphs, maps and other illustrations used in the thesis. Specific items consisting of 12 or more must be listed separately. For example, if there are more than 12 illustrations, then there must be a separate list of illustrations. List the exact title or caption of each figure and its corresponding page. Figures should also be numbered in sequence, using Arabic numerals. The first figure in the third chapter is labeled *Figure 3.1.*

List of Appendices.

An appendix or appendices, if any, should be after the References. Appendices include original data, preliminary tests, tabulations, tables that contain data of lesser importance, very lengthy quotations, forms and documents, computer printouts and other pertinent documents. Appendices should be arranged chronologically as they are cited in the main text. Use capital letters of the English alphabet to track appendices, and always begin with the letter A.

List of Abbreviations and Symbols (Optional).

All abbreviations used in the thesis are listed for easy reference of the reader. This section, however, is optional.

Definition of Terms

This section includes important or key terms that should be substantially and clearly define according to how they are used in the study in order to facilitate understanding of the problem and avoid ambiguous meaning to term which can be otherwise interpreted in different ways.

Operational Terms: It expresses the meaning of the term a used in a particular field of the study. Also, these are the terms related this study, it should be presented in alphabetical order.

Technical Terms: It expresses the meaning of the term which carry a universal definition easily understood by people. The meaning can be captured from the definition on the dictionary or book references, it should be presented in alphabetical order.

CAPTONE PROJECT CONTENT.

The main body of a thesis is divided into five (5) chapters, which comprises of various topics as follows:

Chapter 1 – Introduction

Discuss the overview of the current state of technology and the current condition of the topic in the current local, national and international settings that is related to your chosen topic. This section serves as the introduction of the research paper, providing a brief overview of the project.

Project Context

This section provides the reader the rationale of researchers'/project work and provides a sufficient background, relevance, and importance of the study. A good project context should contain a discussion of any or all of the following: (a) presentation of the problems (b) the existence of unsatisfactory condition, a felt problem that needs a solution to the gap of technology related to the study (c) show the rationale and justification of choosing the subject (d) historical or background of the problem. The researchers must further explain the necessity for the software to be developed and it should be in conformity to the gap in the technology that the researchers found out during the gap analysis.

Research Objective

This section summarizes what is to be achieved by the study. This usually contains general and specific objectives. Research objectives are closely related to research problem.

Conceptual Framework

This section discusses conceptual framework represents the researcher's synthesis of the related literature and studies on how to explain a phenomenon. It maps out the actions required in the course of the study given his previous knowledge of other researchers' point of view and his observations on the subject of research. Build the conceptual framework using the mix of the variables from the scientific articles that researchers have read. The problem statement serves as a reference in constructing the conceptual framework. In effect, the study will attempt to answer a question that other researchers have not explained yet.

Project Purpose

This section describes the significance of the study and the potential value of the study and findings. It should be clear in here, the target audience for the study and how the results will be beneficial for them. It answer the questions – Why is it important? To whom it will be beneficial?

Scope and Limitation of the Study

The scope identifies the coverage of the study in terms of subject, facilities, objectives, area, time duration of the issues to which the research is focused.

The limitation of the study defines the constraints or weaknesses which are not within the control of the writer, therefore they are not expected to be covered by the study.

Chapter 2 – Review of Related Literature

This section discusses the features, capabilities, and limitations of existing researches, IT concepts. Theoretical Framework and software applications that is relevant and closely related/similar to the proposed topic. The researchers can present their review of the literatures either in the chronological order or thematic order. It must be topical discussion and in APA format.

Studies and Literature

Related System- disadvatanges and weakenesses (10minimum)

Proposed System- justify the uniqueness of the system to the existing systems.

Synthesis

This is the portion of the Review of Literature that presents the relationship of the present study to the investigations being reviewed. It summarizes and emphasizes its relevance to the current study. Also, it presents the related studies and related systems the researchers found out. The researchers can also present a technology gap analysis table to be able to justify the gap to be filled in.

Chapter 3 – Methodology

Materials and Methods is the chronological listing of methods, procedure and material used by the proponent/s. Methods used for gathering of data, laboratory and field experiment, theoretical and/or conceptual frameworks.

Research Design

This section states the research design which refers to the overall strategy that you choose to integrate the different components of the study in a coherent and logical way, thereby, ensuring you will effectively address the research problem; it constitutes the blueprint for the collection, measurement, and analysis of data. Note that your research problem determines the type of design you should use, not the other way around! (De Vaus, D. A. Research Design in Social Research. London: SAGE, 2001; Trochim, William M.K. Research Methods Knowledge Base. 2006.)

Population of the Study

This section discusses the target population for this research. Also, the nature (who, where, what) of the selected population where the researchers will conduct a research study, this should be based on the objectives to be achieved.

Sampling Design

This section discusses the sampling technique that the researchers will use to acquire the samples from the population. The researchers can use either probability or non-probability techniques in order to get the number population of respondents. This section also presents the computation on how the sample size can be acquired if the researchers used probability technique.

For some studies, the population may be small enough to warrant the inclusion of all of them in the study. But a study may entail a large population which cannot all be studied. That portion of the population that is studied is called a sample of the population (Nworgu 1991:69). A sample in this study is, therefore, a smaller group 3 - 4 of elements drawn through a definite procedure from an accessible population. The elements making up this sample are those that are actually studied.

Data Collection Instrument

This section discusses the tools the researchers will use to collect the necessary data and information in the conduct of the study. The researchers can discuss the fact finding techniques utilized in the conduct of the research.

Validation of the Questionnaire (*if applicable)*

The questionnaire designed for the study was subjected to a validation process for face and content validity. Face and content validity have been defined by McBurney (1994:123) as following: (a) Face validity is the idea that a test should appear superficially to test what it is supposed to test; and (b) Content validity is the notion that a test should sample the range of behaviour represented by the theoretical concept being tested.

Statistical Treatment

This part states the statistical techniques utilized in the presentation of the survey data. Statistical analysis encompasses the whole range of techniques used in quantitative studies, as all such studies are concerned with the examination of discrete data, with describing this data using quantifiable measures, and with comparing this data to theoretical models or to other experimental

results. Statistical analysis is used to adequately sample populations, to determine relationships, correlations, and causality between different attributes or events, and to measure differences between sets of empirical data. The statistical techniques should be based on the stated objectives. It may include methods of data analysis such as structuring of the questionnaire using various scale, weighted mean, level of significance etc. based on the stated objectives.

Project Design

This section presents the most suitable project design, it believed to be the most crucial stage in a project's life cycle because it identifies key elements and sets the overall tone. However, it's one stage that's often rushed or overlooked. For your project to be successful, you must first understand the steps involved in project design, as well as how to document them. Creating a project design can help you avoid pitfalls down the road and also set a reasonable budget from the outset.

Software Development Model

This part discusses the software process model which pertains to various processes or methodologies that are being selected for the development of the project depending on the project's aims and goals. There are many development life cycle models that have been developed in order to achieve different required objectives. The models specify the various stages of the process and the order in which they are carried out.

Testing and Evaluation Procedure

This part discusses the plan for testing and evaluation procedure in the conduct of the study. The testing and evaluation should be reflected on the objectives. The researchers must discuss the type(s) of testing performed on the system, the test data used, and the results of the test. Testing the system can vary on the system developed by the researchers. For the systems that are client-based, a detailed acceptance test may be required to show that the client has really accepted the system as well as to show that the system has fulfilled the needs of the client.

The process by which a system or components are compared against requirements and specifications through testing. The results are evaluated to assess progress of design, performance, supportability, etc. Developmental test and evaluation (DT&E) is an engineering tool used to reduce risk throughout the acquisition cycle. Operational test and evaluation (OT&E) is the actual or simulated employment, by typical users, of a system under realistic operational condition.

Chapter 4–Results and Discussion

This chapter presents the results and the discussion to support the methodology utilize in the achievement of the objectives. The presentation is usually guided by the specific objectives or problem of the research study.

Chapter 5–Summary, Conclusions and Recommendations.

This chapter includes a summary of the main findings of the study. It also presents the significance of the study, and relates findings to the objectives and problems written in the introduction part of the study. Recommendation/s must be stated in this chapter. This part usually directs the reader to conduct further research on some specific areas related to the study.

Summary

This section presents the summary of the results of the research study. Should isolate all the important points, review all the ideas on your list. Summary does not require you to critic you just summarize the content briefly in order to establish for the reader the ideas of the study.

Conclusions

This section presents the based on the objectives and merge with the finding of the study.

Recommendation

This section presents based on the conclusions, may include further research of the study. It may also include a direction on how to use the software product in order to achieve maximum benefits.

References. This is a list of works cited, as well as works consulted but not cited (example, background reading not necessarily cited) in the construction of the research paper. The list of references is numbered and arranged alphabetically. For format on the writing of references, the APA (American Psychological Association) style of documentation shall be followed.

Appendices. An appendix or appendices, if any, should be after the bibliography. Appendices include original data, preliminary tests, tabulations, tables that contain data of lesser importance, very lengthy quotations, forms and documents, computer printouts and other pertinent documents. Appendices should be arranged chronologically as they are cited in the main text. Use capital letters of the English alphabet to track appendices, and always begin with the letter A.

APPENDICES

A. Technical Background *(diagrams may vary as per applicability)*

a. Planning & Requirement Analysis Phase
   - Preliminary Investigation Answered Questionnaires
   - Transcribed Interview, Observations
   - Story Board
   - Current Flow Chart / Process Flow
   - Proposed Flow Chart / Process Flow
   - Proposed Use Case Diagram

b. Specification & Design Phase
   - System Architecture / Module Specification
   - System Context Diagram
   - Data Flow Diagram
   - Data Dictionary
   - Hierarchical Input Process Output Model

c. Project Schedule
d. Hardware and Software Resources
e. Input/Output/Reports Screen Shots
f. Testing & Evaluation Instruments
g. Implementation Plan
h. User's Manual (CD including Manuscript, System Package, Powerpoint, 5pager)

B. Communication Letters & Forms – all approved letter, including the letter if the considerations, changing of titles, software, and version. Consultants and technical adviser's

approval and recommendation letters.

- Request Letter
- Pre Proposal Approval
- Proposal Approval
- Recommendation for Final Oral Defense

C. **5 pager IMRAD Format**
D. **Plagiarism Results**
E. **Conference Presentation Narrative Report**
F. **Certificate of Acceptance / MOA / MOU** – Certificate with Proper Documentation, MOA & MOU for Technology Transfer (if applicable)
G. **Curriculum Vitae**