CSC 3118: Computer Science Project 1: Writing a Project Proposal

Rose Nakibuule

Importance of a Project/Research Proposal

- A project/research proposal introduces the problem, purpose, and significance of a study as well as the researcher's research question and objectives

- The project/research proposal also gives a brief explanation of the theory guiding the study, a review of relevant literature pertaining to the theory (study), and the research procedures (methodology).

Structure of the project/research proposal

- Title page

- Table of content and abstract

- Introduction

- Literature review

- Methodology

- References

- Work plan and Budget

Title page

The title page contains informations such as

- project title

- Group credentials

- supervisor(s) credentials

- Degree program the project will be fulfilling.

Abstract

- The abstract provides a brief summary that provides the reader with the main points and conclusion of your proposal.

- The abstract should outline the proposal's major headings: the research problem, aim, research design, sampling method, instrumentation, and data and analysis procedures.

- A good abstract accurately reflects the content of the proposal, while at the same time being coherent, readable, and concise.

Introduction

- The introduction explains in detail several components of the research that must be included in any proposal.

- A well-written introduction is the most efficient way to hook your reader and set the context of your proposed research.

- The introduction is your opportunity to demonstrate that your research has not been done before and that the proposed project will really add something new to the existing body of literature.

- Things included in the introduction section
  - Background information to the research topic
  - Problem statement
  - Research aim and objective (Purpose)
  - Research significance
  - Research scope

Introduction: Background

- Background information is in the form of a literature review which sets the context for your research.

- Thats the background information helps you to introduce the topic at hand, and provide a brief definition of the theory from which the study is based.

- The provided background information will help the reader understand the research problem, aims and objectives.

- It will also help to show to the reader that you you have a good knowledge of the body of literature, the wider context in which your research belongs and that you have awareness of methodologies, theories and conflicting evidence in you chosen field.

Introduction: Problem statement

- The Statement of the Problem is an important part of the proposal, because it provides a reason for conducting the research.

- For one to proceed with the research, one must notice a problem in the existing literature that has not been previously addressed.

- When stating the problem statement one should aim ate finding answers to the following questions
  - Why does this research study need to be conducted?

  - What specific issues does this study raise that have not been observed or answered in other literature pertaining to the topic?

- Answering these questions will allow readers to understand why this particular study is important and how the study will attempt to answer new, never-before asked questions.

Introduction: Purpose of the Study

- The purpose of the study specifies the aims and objectives of the study

- Clearly identify the goal of the study in one precise sentence

- Based on the research goal clearly states research objectives.

Introduction: Research significance

- The Research significance focuses on the implications of the proposed study, such as how the studys results will affect future research, theory, counseling, policy, etc.

- Therefore, research significance focus on how the studys results will benefit others.

- It should try to answer the following questions
  - Why should anyone spend public, charity or corporate funds on my research and my research training?

  - Who is my research going to benefit (the stakeholders) or be of use to (the end users)?

  - Is there evidence, for example in the literature, that my research will fill a gap in knowledge or a market demand? How will it build on the existing body of knowledge?

Literature Review

- The Literature Review provides the background for the research problem and illustrates to the reader that the researcher is knowledgeable about the scope of the theory.

- Research as many studies pertaining to the theory/study area as possible.

- Review various dissertations/ projects, as they may help you to understand how to write and summarize previous research.

Methodology

- The Methodology section is the most important section in the entire proposal, as it explains each step the researcher will take in order to conduct his or her research.

- This section discusses what measures the researcher will take in order to achieve the study objectives.

- In this section, it is vital to include the following subheadings while expanding on them in as much detail as possible.

    - Research Design

    - Sampling

    - Instrumentation

    - Data Collection and Analysis Procedures

    - System development and testing procedures.

Methodology: Research design

- Include the proposed research design of the study, whether it is a survey, experiment, observation, secondary data of analysis, etc. Then, explain how this design will derive results.

- Briefly discuss how the data will be administered and collected.

Methodology:Sampling

- This section should include an expanded discussion of the sample.

- Discuss the population under consideration and from where will participants be selected.

- Give the sampling method to be used and the specific sampling method that will be used in selecting the participants.

Methodology:Instrumentation

- Briefly outline the instruments that will be used in the study, including any and all surveys, interviews, or observations.

- Discuss how the instrument(s) will measure the studys independent and dependent variables.

- Each instrument should be discussed in more detail under separate subheadings

Methodology:Data Collection and Analysis Procedures

- Explain the general plan for how the data will be collected, including any survey, interview, or observation procedures.

- Include what statistics or analytical tools will be used for analyzing the data, such as ANOVA, SPSS, or SAS statistics, if applicable.

Methodology: System Development and Testing Procedures

- Explain the general plan for system implementation, including any design, implementation and, or testing procedures.

- Include what statistics or analytical tools will be used for testing the system, if applicable.

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References

- The purpose of the reference list is to allow your sources to be be found by your reader.

- It also gives credit to authors you have consulted for their ideas

- All references cited in the text must appear in the reference list, except for personal communications (such as conversations or emails) which cannot be retrieved.

Work plan and budget

- The proposal should present the detailed work plan and budget for the project.

- This should cover how the project objectives will be accomplished, what outcomes will be produced, what needs to be done and by whom, how the work will be organised, within what time frame.

- Provide a detailed Budget Justification explaining an estimate for each line item/equipment/ task.