INTRODUCTION
A research proposal or prospectus is a formal written plan indicating the focus, manner, and purpose of the research. A proposal may have three functions: communicates the intentions of the researcher, as a plan which maps out the details of the investigation, and a forms contract between the graduate scholar and the faculty committee. The following characteristics will assist you as a framework for your proposal to be developed.

The purpose of this paper is to offer suggestions to the graduate student and the advisor/advisory committee regarding the preparation of the proposal preceding the thesis/dissertation. Since every study is unique to some degree, these suggestions cannot be applied as scientific principles; however, they should be useful as a "point-of-departure" for the student and the graduate faculty.

PROGENITORS
This material was adapted, in part, from materials from the University of Maryland (1965), the University of Northern Colorado (1983), and the University of Northern Iowa’s Industrial Technology Graduate Faculty (April, 1984, and 2007). It was revised by the Graduate Program Committee of the department of Technology in 2021. In all cases where the thesis/dissertation report says past tense should be used, future tense should be used in the research proposal (designated in this document, by the use of parenthesis).

I. Title
   A. Should be brief and concise
      1. Avoid excessive length
      2. Two lines usually suffice retrieval systems limitations
   B. List all elements that seem appropriate to include, then try various arrangements to represent the images evoked to the reader.
   C. Describes accurately the exact nature of the main elements in the content of the research.

II. INTRODUCTION
   A. STATEMENT OF THE PROBLEM
      1. A problem should be stated as an issue, practice, problem, or relationship which merits further investigation and interest.
      2. Should answer: What is the distinct issue or problem the researcher wanted to accomplish or address in this study? What is the need for this study?

   B. STATEMENT OF PURPOSE
      1. Indicates the reason why the study is being conducted or accomplished.
      2. Uses words such as intent, purpose, objective, or resolve to focus on the
phenomenon or idea.

3. Uses action verbs and phrases to convey inquiry, specificity, and design in order to seek measurable, observable data on variables.

4. Answers the following questions:
   a. How can the researcher use the results of the study?
   b. How can the profession or society use the results of the study?

C. STATEMENT OF NEED/JUSTIFICATION

1. Need is society established and presents the implications of the research to society at large or a significant portion of society. It should answer the question, "Why should all this effort be expended?" or What is the worth of this investigation?
2. Should be established on the basis of need or worth by:
   a. Recognized researchers and authorities from the literature: who, what references, say this is important
   b. Society
   c. Recognized authorities (philosophical or theoretical reasons) references

D. STATEMENT OF HYPOTHESIS(ES)

1. The hypothesis is essentially a hunch, speculation, prediction, or projection of outcome based on existing knowledge and theory formulated within variables.
2. It is considered a tentative, yet testable, empirical assertion about an expected relationship between independent and dependent variables.
3. It is recommended that the hypothesis be stated as the null hypothesis since statistical treatment is easier to handle which further notes of no relationship between variables. There is usually a corresponding research hypothesis stating that there is a relationship between two variables.

DD. QUESTIONS TO BE ANSWERED

Some studies are not conducive to hypothesis generation, especially when the research is exploratory. These should have specific questions to be answered.

1. The questions to be answered are those questions that are intended to be answered as the result of this study.
2. They should be listed with clarity and unambiguity.
3. They must be answerable with the data, and preceded by literature or pilot work.

III BODY

A. ASSUMPTIONS

1. A supposition, taken for granted or accepted as true, without proof or verification in regard to a particular investigation.
2. Assumptions are generally not testable or checkable for a variety of reasons: time, resources, money, or because they are accepted procedures.

B. LIMITATIONS AND DELIMITATIONS

1. Recognizes those aspects which could influence the procedures or results over
which the research has no control.
2. Describes conditions, restrictions, or parameters which will be operative.
3. Delimitations - the establishment of limits, boundaries, or demarcations.

C. STATEMENT OF PROCEDURE
1. Defines what steps were (will be) taken to accomplish the research. (A proposal should also include a timeline with target dates. This could be in the appendix, but referred to here.)
2. Should include segments regarding: (1) research design, (2) sample (subjects), (3) instruments to be used, and/or the statistical techniques to be employed, (4) outline of suggested procedure, (5) internal validity, (6) tentative budget, and (7) an indication of the organization of the collected data for analyzing.

D. DEFINITIONS OF TERMS
1. A term should be defined when it is key, pertinent, or unique to the study.
2. A term should be defined when it can be interpreted in more than one way or ambiguous in interpretation.
3. References can and should be used to support definitions where appropriate in this segment.

E. REFERENCE LIST


SUMMARY OF SUGGESTIONS FOR PREPARING A RESEARCH PROPOSAL
A. Title of Prospective Research: __________________________

B. Statement of the Problem
   What are you attempting to do?

C. Statement of Purpose
   Why are you performing this problem?

D. Statement of Need (Justification)
   Societal need or worth for an answer to this problem. Provide a brief review of literature leading to your problem.

E. Statement of Hypothesis/es or Questions to be Answered
   Hunches you have regarding the possible outcome.

F. Assumptions
   Factors related to the problem that you assume to be true.

G. Limitations
   This section will define the extent to which you will carry on the research.

H. Statement of Procedure
   Steps in pursuing the problem.
   (Research design, sample, instrumentation, explanation of procedures, validity, statistical/analytical techniques)

I. Definition of Key Terms
   Unique or special terms defined.

J. Budget
   Identify the budget for various activities that need to be completed.

K. Timeline
   Provide a complete timeline of activities so that the thesis will be ready by the time you will graduate as required by the department and graduate college requirements.

Approved by Grad Committee: Feb 16, 2021
Approved by All Grad Faculty: Pending