
I. Introduction to the problem

A. Theme within a context:
   1. What is the relationship of the central theme of this study to other research and theory?
   2. Is the central problem of the proposed investigation conceptually integrated within the broader framework of relevant theory and research?
   3. Does the introduction lead logically and consistently to the specific questions posed or the hypotheses presented?

B. Researchable questions and hypotheses:
   1. Can the questions and/or hypotheses be tested by empirical data?

C. Specificity of questions and operational definitions:
   1. Are the hypotheses specific enough to be investigated?
   2. Are the variables under investigation and the nature of the relationships among variables clearly and concretely stated?
   3. Can every term in the questions or hypotheses be referred either directly or indirectly to observable, empirical events?
   4. Do the variables stated in the hypotheses refer to a particular set of internally consistent observations that are capable of being defined operationally and objectively?

D. Hypotheses testing, hypothesis generating, and descriptive research:
   1. In view of the current state of knowledge for this line of inquiry, is the most profitable type of study at this point likely to be:
      a. a test of specific hypotheses,
      b. exploratory, perhaps generating a hypothesis, or
      c. descriptive?
   2. If the investigation is primarily exploratory or descriptive in purpose, is every reasonable effort made to present the limits of the questions posed, to make as concrete and definite as possible the nature of relevant observations and variables to be studied?

E. Meaningful questions and hypotheses:
   1. Are the possible findings of the research likely to make a difference that counts in terms of theory, other research, or any practical issue; i.e., is the research worth doing?
   2. In the context of current knowledge, does the proposed research deal with an appropriate problem (question or hypothesis) that is likely to carry the general line of investigation forward?

II. Method

A. Strategy of the investigation:
   1. Has the researcher chosen an appropriate overall strategy for the investigation?

B. Logic and validity of research procedures:
   1. Is the method a clearcut, logical extension of the central theme of the research?
2. Can the method reasonably be expected to result in information that will answer the questions posed?
3. Do the research procedures, such as the ways in which an independent variable is manipulated or in which the dependent variable is measured, provide a valid test of the hypotheses?

C. The population and the sample:
1. What is the population of subjects sampled? Are the pertinent characteristics of this population clearly stated?
2. Does the investigator show adequate awareness of the limits of generalizations he or she can make on the basis of the research?

D. Sample size:
1. Is the size of the sample appropriate?
2. In deciding on sample size, has the researcher considered relevant issues, such as the probable variability among subjects in the sample and the amount of variance likely to be accounted for by the variables under consideration?

E. Sampling procedures:
1. Are appropriate methods of randomization and control used in selecting the sample?
2. Is the sample adequately described?

F. Appropriateness of sample and population:
1. Are the appropriate subjects used for the research?

G. Ethical considerations:
1. Is the procedure ethical?

H. Potency and validity of experimental input:
1. Is the experimental manipulation potent enough to make a measurable difference in the dependent variable?
2. What is the evidence that an experimental manipulation will have the effect it is theoretically expected to have?

I. Specificity of methods and operational definitions:
1. Is the procedure spelled out in enough concrete detail so that another trained researcher could repeat the research? Is there a clear, step—by—step description of the procedure?
2. Is every variable defined operationally in terms of the measures or observations used to translate that variable into concrete steps of the research procedure?
3. If there are alternatives in any phase of the procedure, are the methods of resolving these questions presented?

J. Controls in the research procedure:
1. Are the controls in the research procedure adequate, appropriate, and clearly specified?
2. Are there any "incidental" features of the procedure that might bias the results and contaminate an interpretation of the data?
3. Does the research plan take into account the subjects’ possible expectations, sets, and interpretations of the research procedure?
4. Has the investigator taken into account the possible influence of his or her wished and expectations?

K. Opportunities for discovery:
1. Is the procedure planned so that there is an opportunity for discovery?

L. Appropriateness of experimental design:
   1. Has the researcher chosen the most efficient and effective experimental design; i.e., the design that will provide, within the practical limits of the investigation, the fullest answer to the questions posed or the most adequate test of the hypothesis?

M. Reliability and precision of measurement:
   1. What is the evidence in support of the reliability of every set of observation or measures used in the research?
   2. If reliability has not been established in previous research, how will it be evaluated in the proposed study?
   3. Is the researcher aware of any special problems of reliability that might be involved in the procedure in the proposed research?
   4. Is the precision of the measurement procedures consistent with the intent of the research?

N. Validity and choice of measures:
   1. What is the evidence of validity of every measure used? If the measure has been used in previous work, what is the evidence of validity in the literature? If the measure is developed for this specific research, what evidence of validity will be obtained?
   2. Are there other measures that might better be used?

III. Results

A. Appropriateness of statistical description and analysis:
   1. Does the investigator state explicitly an appropriate statistical description and analysis of the results?
   2. When appropriate, are alternative ways of analyzing the data suggested?
   3. Are the assumptions involved in the statistical analysis recognized, and are the data likely to meet these assumptions? Is the investigator aware of possible problems in the statistical analysis?
   4. At each step in the study, have the appropriate statistical considerations been made; e.g., determining sample size, constructing the research design.

IV. Discussion

A. Interpretation of results:
   1. Are the various kinds of possible results interpreted meaningfully; i.e., in relationship to the hypotheses and central theme?
   2. Are positive findings integrated with previous research and theory?
   3. Are negative or null results interpreted in a way that contributes to knowledge in the field?