How to Write Good Research Proposal and Research Report

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A set of criterion standards has been developed for evaluating the credibility of a research proposal and research report so as to ensure the accurate and trustworthy knowledge obtained from the research. The following criterion standards represent the quality of research methodology. Items 1 to 36 and 49 to 50 are applied to proposal writing. However, students should follow the format stated in the Independent Study, Thesis, Dissertation Handbook. The template of the writing can be downloaded from the website of Graduate Programs in Education.

Research Title

1. Suggest the body of knowledge to be reported by this research.
2. Should present *Research Type, Key Variables, Target Group*

Chapter I: INTRODUCTION

Problem/Issues/Questions to be answered by the study

3. The problem statement and research questions represent the rationale and the purpose of this research, e.g., why I conduct this study, what I want to know.

Research Objectives

4. Each objective conveys precise statement expressing specific data/information to be obtained from the study. Each objective mostly present only one type of research: *Descriptive, Causal-Comparative, Correlational, or Cause& Effect Research.*
5. All objectives cover key variables and related variables necessary for providing complete information for developing the knowledge in accord with the research title.

Hypotheses

6. Hypotheses are consistent with the objectives. (Research objective that emphasizes descriptive knowledge may need no hypothesis.)
7. Present the clear statement reflecting reasonable belief responding to each objective.
8. Hypotheses are testable through inferential statistics.

Theoretical Framework

9. State the underlying theory/theories to be used as the basis or the reference of the study, i.e. theories that provide the input or basis knowledge concerning the research objectives and research hypotheses of this study.
10. Explain how the theory/theories relate to the study, i.e., how theories related to key variables, research objectives, and research hypotheses.
11. There is a summary of chosen theory/theories.

Conceptual Framework

12. Identify the structure of key variables pertaining to research objectives/hypotheses under study. Draw the diagram showing the relationship of variables, e.g. independent variables and dependent variables.

13. The flow chart of the research process, the steps of research work, can be used as the conceptual framework.

Scope of the Study

14. Scope: State the scope of the study, e.g., the scope of variables, samples, measurement of variables.

15. Scope: State the necessary assumptions, e.g. the condition that a sample is assumed representing the target population; the condition that the measurement of variables is assumed being valid, etc.

Note: *14 and 15 are often referred to as "Delimitation of the Study"*

16. Limitation: Identify potential weaknesses and constraints of the study over which the researcher may have no control.

Definitions of Terms

17. Provide the operational definition (observable and measurable characteristics) to all variables pertaining to the conceptual framework or research objectives.

18. There is conformity and consistency between definition of variables and research instruments measuring such variables.

Significance of the Study

19. State the importance of the study and the expected benefit of the findings to specific audiences, e.g. for researchers, for policy makers, for administrators, for teachers or for practitioners..

<u>Chapter II</u>: REVIEW OF THE LITERATURE

20. Significant theories related to the study have been cited.

21. Theories provide the explanation of key variables, the relationship of variables stated in research objectives, and the solutions to the research objectives/hypotheses under study.

22. Summary of what was learned from putting together the cited theories.

23. Cite research findings that help identifying research objectives, research hypotheses, and structure of key variables, research design, research instrument, and data analysis.

24. Cite the up-to-date research findings related to the research objectives/hypotheses under study.

25. Summary of what was learned from putting together the cited research findings.

Chapter III: RESEARCH METHODOLOGY

26. Present research methodology (source of data or population and sample, instrument, data analysis method) for each research objective

Describe the research methodology of each research objective

1. Research Objective 1 ……..
   - Source of Data or Population and Sample
   - Instrument or Data Collection Method
   - Data Analysis

2. Research Objective 2 ……..
   - Source of Data or Population and Sample
   - Instrument or Data Collection Method
   - Data Analysis

Go on to next research objectives …

Population

27. The target population is quantitatively and qualitatively defined.

Sample

28. Clearly describe the sampling method (how to select the sample) led to the unbiased sample strongly represents the target population.

29. The sample size meets recommended guidelines for minimum sample size, e.g. refers to Krejcie & Morgan (1970.), or based on degree of standard errors applying Yamane formula.

30. Present both population and sample sizes in the same table.

Instrumentation

31. Based on each variable, explain the instrument or technique used for measuring each variable

32. Based on each instrument, describe:
    1. How to develop
    2. How to determine content validity, mostly the Item-Objective-Congruence (IOC Index) judged by the experts is used.
    3. How to conduct the tryout and the reliability to be determined.
    4. The structure of items and variable to be measured, what items measure what variable.
    5. The criteria of scale or score interpretation.

33. If the standardized instrument is used, describe the background of instrument development and use, the authority or the developer, the published reliability and validity.

34. If the researcher-made instrument is used, (1) describe the process of instrument development, (2) describe the content validity determination by identifying the names of experts with the qualification who judge the content validity, the IOC index (Item Objective Congruence) may be used, (3) describe the tryout process (or the pilot study) in order to determine the reliability. The method of evaluating the reliability (e.g. applying Cronbach Alpha Coefficient reliability) and the acceptable value of obtained reliability should be presented.
35. Describe the data collection method and the scoring, rubric, criteria of scale/score interpretation for each instrument.
36. Summary of the Research Process: Using the following table.

Summary of the Research Process

Research objective	**Source of Data or Sample**	**Data Collection Method or Research Instrument**	**Method of Data Analysis**	**Expected Results**
1.	(Based on the variables specified in the research objective, from whom or from where the data pertaining to such variables will be obtained?)	(Based on the operational definition of variables specified in the objective, what is the structure of the research instrument or the technique to be used for collecting the required data?)	(Refer to how to analyze the "Qualitative Data" or what statistical method will be used to analyze the "Quantitative Data".)	(Refer to the expected answer or the expected finding responsive to the research objective.)
2.				
3.				
4.				

Chapter IV: RESEARCH FINDINGS

Data Analysis, Presentation, and Interpretation

37. The sequence of data analysis is conformed to the sequence of research objectives/hypotheses, and all research objectives/hypotheses are taken into account.

38. Use effective method of data analysis for each research objective and each research hypothesis. The appropriate statistical techniques have been used for quantitative analysis, and the standard analysis and synthesis of qualitative data have been evident e.g. coding sheets, matrix of key knowledge, clustering of knowledge to dendrogram.

39. The presentation of the result of the data analysis is technically correct, using the standard format, and completely conformed to the research objectives and research hypotheses.

40. The interpretation of the data analysis is technically correct and completely provides the relevant answer to the research objectives/hypotheses.

Chapter V: Conclusion, Discussion, and Recommendations

41. **Findings Summary**: Present the research findings in accord with the research objectives/hypotheses, and consistent with the result of the data analysis.

42. **Conclusion:** Conclude overall knowledge learned from the study in accord with the research problem and research questions, and summarize the findings pertaining to the research objectives/hypotheses.

43. **Discussion:** Discuss the deviation and conformity between the findings and the related theories or related research findings (from Chapter 2) , and provide the explanation of such deviation.

44. **Discussion:** Discuss the implication of the finding, provide the elaboration on the findings by referring to additional information obtained from the study (e.g. the detail of response from the questionnaire), or from the other research findings, including the limitations of this study and the points that need to modified in the further study.

45. **Recommendation:** Systematically recommend the policy makers, practitioners, and researchers on the application of the research findings, and what should be the further research in the future. Mostly the recommendations are based on “Significance of the Study” specified in Chapter 1.

Overall Quality and Credibility of the Research

46. Internal validity: the consistency and conformity of research objectives, terms definition, sample, measurement of variables, data collection, data analysis, and findings.

47. External validity: the extent that the research findings can be generalized to the target population under study.

48. The abstract accurately and completely conveys the research design and findings.

49. Use APA style and format in writing the text.

50. All cited names, studies, and materials are put in the bibliography.