

PREPARATION OF RESEARCH PROPOSAL

Preparing the research proposal is an important step because at this stage, entire research project gets a concrete shape. Researcher's insight and inspiration are translated into a step by step plan for discovering new knowledge. In the proposal, the researcher demonstrates that he/she is familiar with what he/she is doing.

Following are a few purposes of a research proposal

- a. The proposal is like the blue print which the architect designs before construction of a house. It conveys the plan of entire research work along with justification of conducting the same.
- b. The proposal is to be presented to funding agency or a departmental research committee. Now presentation of research proposal is compulsory before the committee as per U.G.C. guidelines of July 2009. In such a committee, a number of experts participate and suggest important points to help and guide researcher.
- c. Research proposal serves as a plan of action. It conveys researcher and others as to how study will be conducted. There is indication of time schedule and budget estimates in the proposal which guides researcher to complete the task in time with in sanctioned budget.
- d. The proposal approved by committee serves as a bond of agreement between researcher and guide. Entire proposal becomes a mirror for both to execute the study further.

Following components are generally included in the research proposal. It is not necessary to follow this list rigidly. It should provide useful outline for writing of any research proposal.

Normally, a research proposal begins with an Introduction, this gives clearly the background or history of the problem selected. Some also calls this as a theoretical / conceptual framework. This will include various theories / concepts related to problem selected. Theoretical frame work should have logical sequence.

- A. Identification of Research Topic
- B. Review of Related Literature
- C. Rationale and Need of the Study
- D. Statement of the Problem
- E. Operational definitions of the key terms used
- F. Objectives
- G. Research questions/ hypotheses
- H. Methodology
- I. Tools
- J. Procedure of data collection
- K. Techniques
- L. Delimitations
- M. Probable Implications

N. References

O. Time Frame and Budget

A. Identification of Research Topic

As discussed earlier, researcher will spell out as to how the problem emerged, its social and educational context and its importance to the field. Some researchers name this caption as background of the study or Theoretical / Conceptual frame work of the study. In short, here the entire topic of the research is briefly introduced along with related concepts and theories in the field.

B. Review of Related Literature

In this section researcher concentrates on studies conducted in the area of interest. Here, a researcher will locate various studies conducted in his area and interest. Try to justify that all such located studies are related to your work. For locating such studies one will refer following documents / sources

- Surveys of research in education.
- Ph. D. Theses available in various libraries.
- Current Index to Journals in Education (CIJE)
- Dissertation Abstract International (DAI)
- Educational Resources Information Centre (ERIC) by U.S. office of education.
- Various national / International journals, Internet resources

C. Rationale and Need of the Study

Rationale should answer the question – “why” this study is conducted? It “why” is answered properly, then rationale a strong one. For strong rationale, the earlier section of review will be of much help. Identified research gaps will convey as to why this study is conducted.

Suppose the investigator wants to study the following problem - Development and Try out of CAI in Teaching of Science for Class VIII in Odisha.

Here, the researcher should try to answer why CAI only? Why it is in Science teaching only? Why it is for class VIII only? Why it is in Odisha only? If these questions are answered adequately, then rationale becomes strong. Here one has to identify gaps in the area of Science teaching especially with reference to CAI. Apart from this, the need for conducting the present study is justified.

D. Statement of the Problem

Here researcher will write the statement of his/her research problem on which he/she want to study.

“Development and Try out of CAI in Teaching of Science for Class VIII in Odisha”

E. Operational definitions of the key terms used

Every research study involves certain key or technical terms which have some special connotation in the context of study; hence it is always desirable to define such key words. An operational definition is one which ascribes meaning to a concept by specifying the operations that must be performed in order to measure the concept, e.g. the word “achievement” has many meanings but operationally it can be defined as —the scores obtained by the students in English test constructed by researcher in 2021. Here it is clear that achievement in English will be measured by administering to test constructed by Mr. So and So in 2021.

F. Objectives

Objectives give more clarity to researchers and reactors objectives are the foundations of the research, as they will guide the entire process of research. List of objectives should not be too lengthy not ambiguous. The objectives we stated clearly to indicate what the researcher is trying to investigate.

G. Research questions/ hypotheses

While conducting any research, researcher would definitely aim at assuring certain questions. The researcher should frame such questions in a praise way. Some researchers simply put the objectives in the question form, which is just duplication of objectives, which be avoided.

Depending on the nature of study, the researcher would formulate hypotheses, The proposition of a hypothesis is derived from theoretical constructs, previous researches on earlier researches, the researcher can write research or will hypothesis will be more suitable however as per evidences from previous researches one can decide the nature of hypothesis. Formulation of hypothesis is an indication that researcher has sufficient knowledge in the area and it also gives direction for data collection and analysis. A hypothesis has to be :-

- (I) Testable
- (II) have explanatory power
- (III) State expected relationship between variables
- (IV) Consistent with existing body of knowledge

H. Methodology

A researcher should report about method of research. Depending on nature of study – qualitative or quantitative the method of research need to be reported along with justification i.e. how particular method suits one’s study be discussed in brief. If it is survey, do not write simply survey, but indicate further the type of survey too. If it is experimental design, mention specifically which type of experimental design.

Population and Sample

This section of research proposal will mention about selection of sample. First, the researcher should mention about would like to in for. One must describe the population along with total size. This is especially needed in case of randomization and stratification. Researcher should mention about probability non probability sampling design. Accordingly selection of sample needs to be detailed out along with its justification. Many researchers write about randomization without mentioning size of population. The researcher also writes about stratified sampling without details of various strata along with its size. As from the sample statistics, population parameter is to be estimated, solution of sample be done with enough care.

I. Tools

In this section of proposal selection and description of tool is for be reported with proper justification. Steps of construction of particular tool need to be reported in brief. If readymade tools are used then its related details need to be reported. Details like author of the tool, its reliability, validity, and norms, along with scoring procedure need to be reported. It has been found that many researchers fail to report the year when tool was constructed. As far as possible, very old tools need to be avoided. In case of readymade tools, always look for which population it was desirable to use valid and reliable tools.

J. Procedure of data collection

Here the researcher will mention about the administration of tools on selected sample for data collection and interpretation of scores through using of appropriate statistical techniques.

K. Techniques

This is crucial step in proposal. As to how collected data will be tabulated and organized for the purpose of further analysis is to be reported in this section. If it is a quantitative research, parametric or non-parametric statistical techniques will be used need to be reported. Before applying any technique for data analysis, verify the needed assumptions about that particular technique. Suppose if one wants to go for ANOVA, verify about assumption for normality, nature of data – especially in interval or ratio scale, homogeneity of variances and randomization. If it is qualitative analysis, detailed out about nature of data, its tabulation, organization and description. If data are to be analyzed with the help of content analysis, how exactly it will be done needs to be detailed out. Whichever technique one is using, it needs to be in tune with objectives and hypotheses of study.

L. Delimitations

In any research, it is not possible to cover all aspects of the area of interest, variables, population and so on. Thus, a study has always certain limitations. Limitations are those conditions beyond the control of the researcher that may play restriction on conclusions. Sometimes, the tool used is

not revalidated. This it becomes limitation of the study. Thus limitation is a broad term, but delimitation is a narrow term. It indicates boundaries of the study. The study on achievement in English can be delimited to only grant-in-aid school, which includes schools that follow Maharashtra State Board, so here beyond this conclusion cannot be extended. This can be made more specific by specifying the population and sample.

M. Probable Implications

If we have already reported strong rationale then, hardly there is any need to go for significance. In rationale part, one must describe as to how this study will contribute to the field of education. How the findings / results of particular research will influence educational process in general need to be reported in the rationale only. How teacher, parents, students and stakeholders will benefit from this research findings.

N. References

During preparation of proposal, researcher consults various sources like books, journals, reports, Ph.D. theses etc. All such primary / secondary sources need to be reported in the references. Generally American Psychological Association – Publication Manual be followed to write references. All authors quoted in proposal need to be listed in references.

O. Time Frame and Budget

The proposal submitted for M.Phil or Ph.D. degrees generally do not require time frame in all universities, but there is a fixed limit for these courses. It is always advisable to give detailed schedule if research work, as it helps to keep researcher alert. Proposals to be submitted to funding agency definitely ask for time frame. Time frame need to be reported keeping following points in view. Time / duration mentioned by funding agency are properly divided.

- Time required for preliminary work like review of literature
- Time required for preparing tool/s
- Time required for data collection, field visits etc
- Time required for data analysis and report writing

Budget

The proposal submitted to the funding agency needs details regarding financial estimates. It may include expected expenditure keeping various budget needs. Following budget needs be kept in view along with amount.

- Remuneration for project team, i.e. principal investigator and project team.
- Remuneration for secretarial staff like clerk, data entry operator, accountants, helpers etc.
- Remuneration for appointing project fellow, field investigators etc.

- Expenditure towards purchase of books, journals, tools etc.
- Expenditure towards printing, Xeroxing, stationery etc.
- Expenditure for data entry, tabulation and analysis of data.
- Expenditure for field work, travel for monitoring purpose etc.
- Expenditure for preparing final report.

Suggested Reading

Ary, D., Jacobs, L. C., Sorensen, C., and Razavieh, A. (2010), Introduction to Research in Education, Wadsworth Cengage Learning, Canada.

Best, J. W. and Kahn, J. V. (1995), Research in Education, Prentice Hall, New Delhi.

Cohen, L., Manison, L., and Morrison, K. (2018), Research Methods in Education, Routledge, London and New York.

Creswell, J. W. (2012), Educational Research Planning, Conducting, and Evaluating Quantitative and Qualitative Research, Pearson, New York.

Gay, L. R., Mills, G.E., and Airasian, P. W. (2012), Educational Research Competencies for Analysis and Application, Pearson, New York.

Kerlinger, Fred. N. (1978), Foundations of Behavioral Research, New York University.

Kothari, R.C. (2004), Research Methodology, New Delhi, New Age International (P) Limited, Publishers.

Langenbach, M., Vaughn, C., and Aagaard, L. (1993), An Introduction to Educational Research, Allyn and Bacon, Boston.