

**CHHATISGARH SWAMI VIVEKANAND TECHNICAL
UNIVERSITY, BHILAI**

PROFORMA FOR SYNOPSIS

- **Proposed Title of the Thesis:**
- **Introduction: Giving Purpose of research (in about 500 words):**
- **A brief Review of the work already done in the field:**
- **Noteworthy Contribution in the field of proposed work:**
- **Proposed Methodology during the tenure of research work:**
- **Expected outcome of the proposed work :**
- **Bibliography in standard format:**
- **List of published papers of the candidate:**

**Signature of the Supervisor/
candidate**

Signature of the

Proposed Cover Page

SYNOPSIS OF THE THESIS

ON

“PROPOSED TITLE ”

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Submitted by

<Italic>

NAME OF THE CANDIDATE

Under the Supervision of

<Italic>

<Name/s of the Supervisor/s>

Research Center: <Name of the Approved Research Center>

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Faculty of

XXXXXXXXXXXXXXXXXXXXXXXXXX

**CHHATTISGARH SWAMI VIVEKANAND TECHNICAL
UNIVERSITY**

BHILAI

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August 2013

Under the supervision of

Supervisor I : <Name>, <Designation>, <Affiliation of the Supervisor>

Supervisor II : <Name>, <Designation>, <Affiliation of the Supervisor>

Supervisor III : <Name>, <Designation>, <Affiliation of the Supervisor>

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In writing the Synopsis of the proposed research work, the decisions, suggestions and guidance of the Supervisor/s will be final and binding

Some guidelines in writing the Synopsis

(Remember that this is a research proposal intended to be carried out during next few years once it gets approved by the competent authority)

Proposed Title of the thesis:

This should be brief and self-explanatory. It should relate directly to the main objective of the proposed research. A more specific and descriptive sub-title can be added if necessary, for example to indicate the main methodology that will be applied. The title of the final Thesis cannot be changed after the title getting the approval of the RDC. Hence a judicious thinking should be put while chalking out the title.

Introduction: Giving Purpose of research (in about 500 words):

It should cover general importance of the research topic taken and its justification in present era. Here you should introduce the main problem, set it into context and introduce the particular niche within the main subject area that you will work with. For example, the main subject area could be diagnosis through processing of biological signals and the Introduction would then briefly argue why it is relevant to be concerned with biological signal processing – what are the present problems in this sector and how they can be solved. Justification for the niche should also be included in the Introduction. A research problem can be, for example, a gap of knowledge, an unexplained observation, something not yet analyzed (using this systematic, with this level of detail, from this particular angle), or something that does not fit traditional beliefs. The information you provide as documentation for the existence and relevance of the problem should primarily be scientific peer reviewed literature. Newspaper articles, blogs and a lot of material from the internet are not subject to quality control and are therefore considered less trustworthy.

A brief Review of the work already done in the field:

(This part of the synopsis will

- *elaborate the review work of the progress made in the field at broader sense by the previous researchers*
- *create the motivations for carrying out the research work*
- *help to identify the research gap and the need*
- *assist the scholar to identify the problem*
- *to formulate the objectives of the current research and*

- *to decide the methodology to be adopted)*

It must cover the work done by other researchers in this field. It should include review of 40 – 50 research papers published in international and national research papers covering duration (tentatively last 15/ 20 years from the year of registration). Every reference should be represented by 3- 6 lines abstract list of that paper. In this section you present details regarding the research problem. You should present documentation of the existence of the problem, how it is manifested, who it affects and involves, what roles and interests the involved actors have, the historical background to the problem (including what has led to the actual situation), and the problem's complexity (what it consists of and what it is a part of). The problem analysis is based on a critical review of scientific literature: the theories typically used to frame research on the subject area, knowledge available and research methods used with what degree of success. The review can add to the justification of choice of the subject included in the Introduction. It is important that the review includes recent literature, and that it critically synthesizes knowledge within the subject being addressed rather than merely describing it.

A critical review of the subject being addressed involves:

- Identification of relevant literature through a thorough and systematic literature search using combinations of relevant key words in appropriate databases,
- The relevant literature must be critically read, meaning that the soundness of research approach and conclusions must be evaluated – you should of course not base your arguments on untrustworthy literature, and
- Important approaches, conclusions and/or discussions of the literature are presented in an argument logically leading to your objectives.

Remember, the literature review is not just a list of the methods used/conclusions made by previous studies. It is not a reporting of the research papers published. Rather it is an analysis of the research papers published and conclusions drawn out of them. Have a look at research papers published in international journals for inspiration.

(Review of at least 50 research papers/articles/books/materials from e-resources spanning over last ten years are to be included)

Noteworthy Contribution in the field of proposed work:

This part of the synopsis will present the work already done by the researchers on the topic and therefore will review the research work already carried out using the same methodology as proposed. A detailed analysis of the reported works is to be done at this section. Contributions of other researchers are to be mentioned. This part actually is the base for formulation of the proposed research work carving out of the assumptions, limitations, methodology and conclusions of the previous researchers. The base paper/s of your research work is to reported at this section. The number of research papers should

be limited to maximum Ten since more paper you include here means lot of works have been done in the proposed field and less scope for further work exists.

Proposed Methodology during the tenure of research work:

A plan of work describing the various aspects of the study in a logical sequence along with the methodologies to be employed, are the most important aspects of any PhD synopsis. Sufficient details to demonstrate that the researcher has a fairly good idea about the nature of work likely to be involved should be provided. In the case of experimental sciences/Engineering/Technology, e.g., which equipments and experimental procedures will be used to obtain the results; in the case of social sciences/management what resource materials will be used; whether the required information will be obtained from primary or secondary sources, etc. A time schedule for the various aspects of the proposed research may be provided wherever possible.

A research proposal follows an overall methodology to make conclusions in relation to the overall objective. Some types are experiments, surveys, Simulation, models and case studies. Within a given research methodology several data collection methods can be relevant, and both quantitative and qualitative methods may be used in the same study. You should specify what research methodology is chosen to fulfill the research objectives. A description of the methodology used does not mean a reproduction of standard textbook definitions; instead, references should be used.

The description of data collection methods should always be as specific and realistic as possible. It should be clear that the chosen methods are appropriate and suitable for achieving the objective. A useful step in that regard is to identify what data is required to answer the specific objectives/research questions. After having read this section on methods, the reader should have a clear understanding of what will be actually done during data collection. State what data will be collected using a given method and avoid vague or general statements.

An important part of the methods description is the sampling design. How, and how many, objects for experiments, plots for a vegetation survey, or respondents to questionnaires/interviews are chosen have implications for the subsequent possibilities for generalizations and the validity and reliability of research findings.

An often overlooked part of student research design is the data analysis. However, if data analysis is not considered before collection important data are likely to be missing at the write-up stage. You should, as a minimum, have an idea of what calculations and combinations of the data you will make. The research synopsis must specify how the collected data will be analyzed to answer the research questions/objectives. Strategies may include testing of hypotheses, which means that dependent and independent parameters for analysis should be clear as should the type of statistical

analysis, the number of observations needed etc. The data to be used for analysis either can be collected from various sources, through experimentation, using a simulator, performing virtual experimentation or through questionnaire. The data can be primary data generated by the researchers or the secondary data obtained by other researchers in the relevant area.

This is where you set out the details of the specific methodologies and techniques you will use. Consider the following:

- How is the study to be done?
- What are your sources of data?
- What data will be collected?
- What kinds of methods, procedures and instruments will be used for data collection?
- Who is included (excluded) from your research population or sample and why? (Assumptions made if any)
- How do you intend to ensure reliability and validity?
- In what contexts will your results be interpreted and understood?

The Methodology section is not a repetition of the Design section. The latter gives a broad overview, while the former deals with the practical specifics, of what, how, who, and where.

Expected outcome of the proposed work:

So far with your objectives being clear to you and the methodology to be adopted, you are now in a position to foresee the outcomes of the proposed work. This unit is basically based on the prediction of your work to be carried out. The outcomes can be divided into three major categories: Academic outcome, technical outcome and scientific/socio-economic outcome. It is to be narrated how the expected outcomes will help the community or how it will help in improving the present techniques being employed. This part should match with your objectives. How the objectives have been fulfilled are to be mentioned in this section.

Bibliography in standard format:

This section outlines the basic resources to be used during the course of the proposed work. It is the bibliography and not the reference and hence need not to be cited in the text written above. The format should be the same as provided in the official website of CSVT University in the link of “PhD Thesis manual”.

Important Points

Plagiarism

Plagiarism is always a risk when summarizing someone else's work. To avoid it:

- Take notes in your own words. Using short notes or summarizing key points in your own words forces you to rewrite the ideas into your own words later.
 - If you find yourself sticking closely to the original language and making only minor changes to the wording, then you probably don't understand the study
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- **Stay focused** on the research question, be concise, and avoid generalities.
 - **Edit for style.** Write to an intelligent, interested, naive, and slightly lazy audience (e.g., yourself, your classmates). Expect your readers to be interested, but don't make them struggle to understand you. Include all the important details; don't assume that they are already understood.
 - **Eliminate wordiness**, including most adverbs ("very", "clearly"). "The results clearly showed that there was no difference between the groups" can be shortened to "There was no significant difference between the groups".
 - **Use specific, concrete language.** Use precise language and cite specific examples to support assertions. Avoid vague references (e.g. "this illustrates" should be "this result illustrates").
 - **Use scientifically accurate language.** For example, you cannot "prove" hypotheses (especially with just one study). You "support" or "fail to find support for" them.
 - **Rely primarily on paraphrasing, not direct quotes.** Direct quotes are seldom used in scientific writing. Instead, paraphrase what you have read. To give due credit for information that you paraphrase, cite the author's last name and the year of the study (Smith, 1982).
 - **Re-read** what you have written. Ask others to read it to catch things that you've missed. **Edit for completeness and accuracy.** Add information for completeness where necessary. More commonly, if you understand the article, you will need to cut redundant or less important information.

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Your Synopsis should be able to meet the following queries of the Examiners/Members of the Evaluating Committee:

- Is the research topic, question or intention clear?
- What is the extent of the researcher's statement about their involvement in the project?
- What is the scope of the literature review?
- How is the literature review related to:
 - The research topic?
 - The research methods?
 - The research data?
 - The research outcome/recommendations/conclusion?
- What research methods are proposed to be used?
- How the research methods are to be handled?
- How appropriate are the research methods to the research topic?
- How does the researcher demonstrate an awareness of the limitations of the research methods?
- How will you gather the information?
- What are the main themes addressed in the synopsis?
- What is the basis for interpretations of the data?
- What is the relationship between the philosophical/theoretical basis and the interpretations?
- How do the interpretations clarify the data?
- What new information or ways of looking at the topic does the researcher present?
- What implications/recommendations/conclusions can be drawn from the research?
- How consistent are the implications with
 - The research question?
 - The philosophy underpinning the research?
 - The methods to collect the data?
- What are the practical and policy implications described?
- How are the contents, references, reviews presented?
- Does the researcher identify related areas that are not included in the research report?
- What are the reasons for not including those areas?
- What is the learning outcome of the proposed research project?