

Basic concepts And Steps of research proposal development

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What is the research study

- Research means a scientific and systematic search for significant information on a specific topic.
- In fact, research is an art of scientific investigation to discover answers to questions through the application of scientific procedures



What is a research proposal?

A research proposal is your plan of work:

- **What** you intend to study (scope and research questions).
- **How** you intend to study your topic (methodology).
- **Why** this topic needs to be studied (significance).
- **When** you will complete this work (timeline).
- **Where** you will conduct this work (Occasionally).



Parts of a research Proposal

- Title
- Summary
- Introduction/Background
- Problem Statement
- Objectives



Parts of a research Proposal

- Review of Literature
- Methodology
- Time frame and work schedule.
- Facilities needed.
- Personnel
- Budget
- Bibliography & Appendices



Title

- A mini-abstract of your investigation that provides the **first impression** for reviewer, you should put the most important words first.
- A title page should contains:
 - Title
 - Name
 - Program
 - Date
 - How to reach you
 - Any instructions for the readers?



Title

Good:

- Orient your readers to your research topic.
- Indicate the type of study you will conduct.

Avoid:

- Too long title will not gain the reviewer's attention or interest.
- Too short title will make the reviewer too critical of proposal.



summary

- Summarize important elements (Introduction, Statement of the Problem, Background of the Study, Research Questions or Hypotheses, and Methods and Procedures).
- Provide a brief (one page) overview of the proposal.



summary

Good:

- give a short but informative background to justify the research hypothesis and objectives.
- Clearly state the hypothesis.
- State the objectives and/or aims of this proposal.
- State the impact, significance and innovation in this proposal.



summary

AVOID

- Technical and condensed phrasing of the project.
- No clear statement of what is the purpose of this study.



Introduction

- This section provides necessary background information to your study and provides readers with some sense of your **overall** research interest



Introduction

Good:

- Give the reviewer the needed information to understand the goals, aims and approaches in this proposal.
- Indicate the general scope of your project, but do not go into so much detail that later sections (literature review) become irrelevant.



Introduction

- Introduction should be short about one or two pages
- Build up the background towards answering a specific question that is unknown.



Introduction

AVOID:

- Do not expand introduction to unnecessary information that does not support the hypothesis.
- Introduction should not exceed one third to one half of proposal.
- No exploratory data generally negatively impacts the proposal.



Problem Statement (hypothesis)

- Answer the question: “**What** is the gap that needs to be filled?” and/or “**What** is the problem that needs to be solved?”
- State the problem clearly early in a paragraph.
- Limit the variables you address in stating your problem or question.
- Consider framing the problem as a question.



Rationale (justification).

- a set of reasons offered by a researcher for conducting research into a particular subject .
- Show the significance impact of your study
(who is getting benefit from doing this research)?



Rationale and Hypothesis.

Good

- Clearly state the hypothesis or number of hypotheses that will be addressed in the proposal.
- Give a rationale why this hypothesis is important to investigate.

Avoid

- Avoid combining the two together. It could be confusing to the reviewer.
- Too long of a hypothesis makes it hard to understand the aim of the research.



Objectives

General objective:

- Explain the broad goals and research objectives of the study.
- State what the researcher expects to achieve by conducting the study in general terms.
- Usually less measurable.



Objectives

Specific objectives:

- Provide a more measurable points.
- Specific objectives should be

SMART:

Specific, Measurable, Achievable, Relevant and Time-bound.



objectives

Good

- should be stated very clearly
- Even just one clearly stated relevant objective for a study would be good enough.

Avoid:

- Too many objectives to be avoided because it may send a bad impression to reviewer.



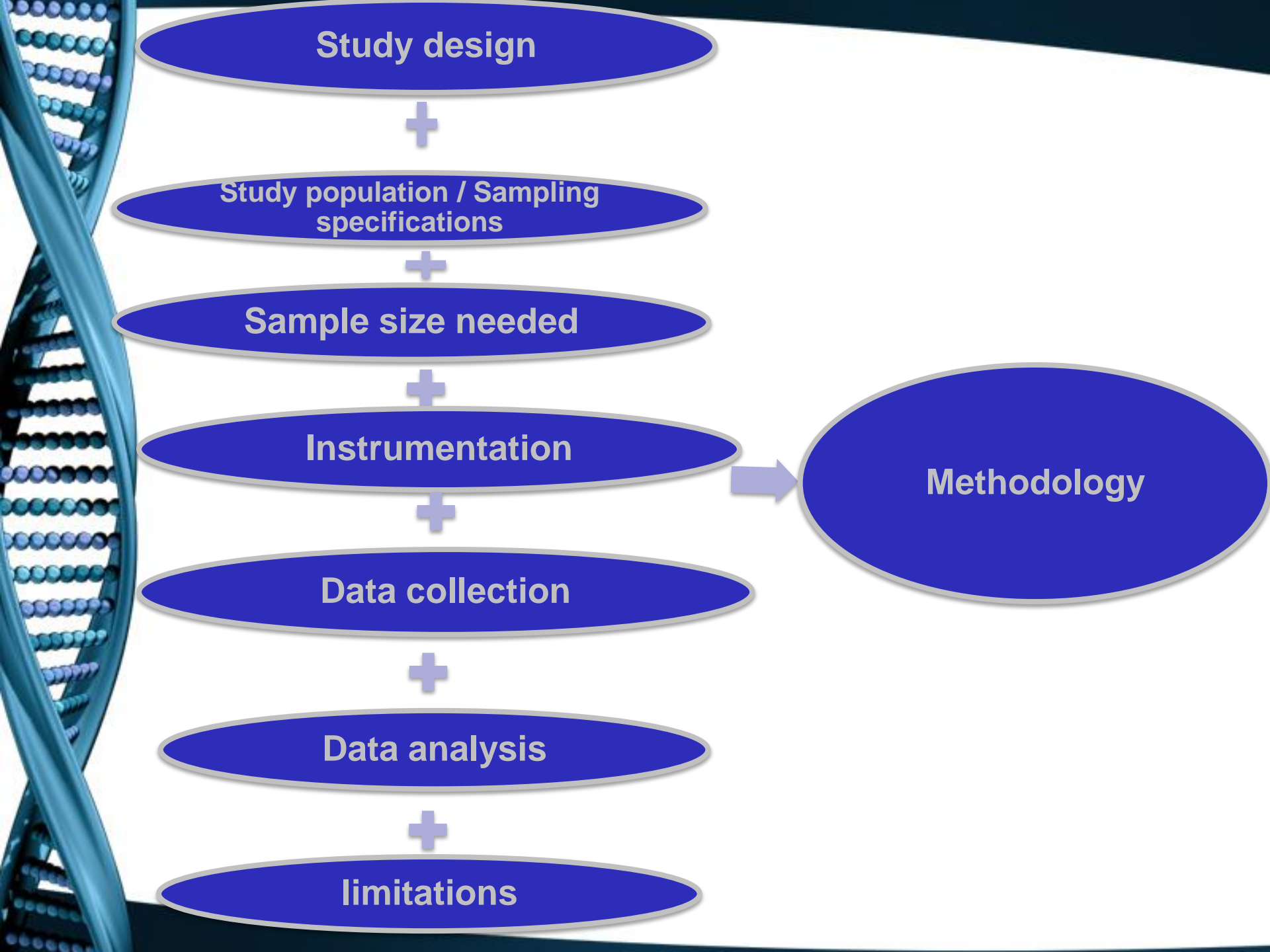
Review of Literature

- This section reflects extensive review of literature done by the researcher.
- In this section what is already known about the topic is written including the lacunae.
- It helps the researcher to gain good knowledge in that field of inquiry.
- It also helps the researcher to have insight on different methodologies that could be applied.
- Just quoting the literature verbatim will not serve the purpose (**Plagiarism**).
- It is important to make it coherent, relevant and easily readable knowledge .



Research methodology

- Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically
- It is necessary for the researcher to know not only the research methods/techniques but also the methodology.
- It is essential to discuss procedures clearly and completely with considerable amount of details





Study design

- It is a specific plan or **protocol** for conducting the study, which allows the researcher to translate the conceptual hypothesis into an operational one.
- The study design should be clearly stated
- The study design to be used should be appropriate for achieving the objective of the study



- **Design examples**

- Prospective vs. Retrospective
- Descriptive
- Observation
- Intervention clinical trial
- Surveys, interviews, questionnaires
- Focus groups, field studies
- Others



Study population / Sample specifications

- It is important to describe which would be the study population
- How study subjects would be selected, randomization process and other details should be given



Sample size

- It is important to mention in the protocol what would be the optimal sample required and how it is arrived.
- Determination of sample size is a bargain between precision and the price (Resources & expenses involved).



Instrumentation

- Proposal should include the details of all process to be adopted in the study and the instruments to be used.
- How exposures, outcome variables and other variables are going to be measured should be described in detail



Data collection and analysis

- Describe the specific methods of data collection you are going to use e.g. surveys, interviews, questionnaires, observation, archival or traditional library research.
- Explain how you intend to analyze and interpret your results. Will you use statistical analysis? Will you use specific theoretical perspectives to help you analyze a text or explain observed behaviors?



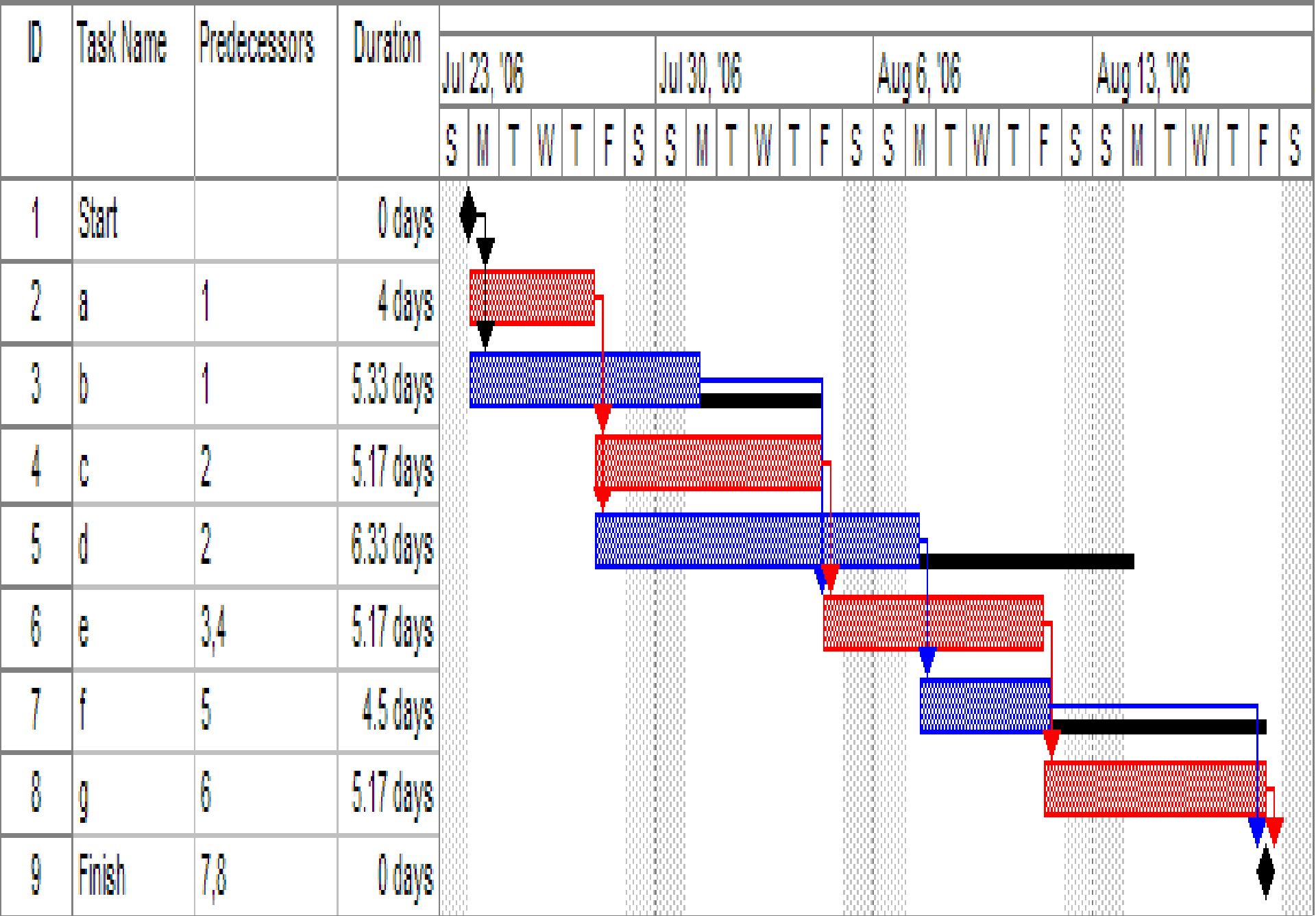
limitations

- Address potential limitations. Are there any practical limitations that could affect your data collection? How will you attempt to control for potential confounding variables and errors?



Time Frame & Work Schedule

- The proposal should include the sequence of tasks to be performed, the anticipated length of time required for its completion and the personnel required
- It can be presented in tabular or graphic form (Gantt chart)
- Flow charts and other diagrams are often useful for highlighting the sequencing and interrelationship of different activities in the study



Gantt chart



Facilities

- The proposal should also include the important facilities required / available for the study namely computers, laboratories, special equipment etc



Personnel

- Proposal should include who are the primary investigators and co investigators, their qualifications, research experience etc
- The proposal may also include the major roles to be taken up by different investigators



Budget

- The budget translates project activities into monetary terms
- It is a statement of how much money will be required to accomplish the various tasks



Bibliography & Appendices

- Include a working bibliography of key texts that inform your study and methodology.
- Your appendices may include Experiment Diagrams, Permissions for Human Subject Testing, etc.
- Both bibliographies and required appendices tend to be discipline specific: know what the requirements are.



Common pitfalls to avoid

- **No enough details about protocol**
 - Write your proposal so anyone reading it can understand your plan
- **Is your study significant?**
 - Does it answer the larger “So what” question? Why should researchers care about this work?
- **Underpowered sample size**
 - Describe why you are using the sample size and justify it
- **Invalid or unreliable instrumentation**
 - Has your instrument been tested with the population you are studying? If not, will you test it within your study?
- **Improper statistics**
 - Are you using the appropriate statistical analysis?

More Proposal “Nuts and Bolts”

- **Length**
 - Varies by field; most are roughly 10 pages, but they could be much or less.
- **Style Considerations**
 - Tone
 - Coherence
- **Grammar and tenses**
- **Visual Aids**



Style Considerations: Tone



- When conveying your attitude in your writing:
 - Try to strike a consistently confident tone.
 - Avoid an apologetic or arrogant tone.



Style Considerations: Coherence

- Move from **“old”** information to **“new”** information.
- Each sentence must follow logically from the one before. A well written text is a "chain of ideas".
- Put the most important information at the end of the sentence (stress position).
- Start sentences with **short, easily understood phrases.**
- Use **“stock” transitional phrases.**
- Use **pronouns** and/or **recycling.**



Grammar and tenses

□ Voice

- Active: I will conduct the bulk of the research during the six-month fieldwork period.
- Passive: The bulk of the research will be conducted during fieldwork.

□ Reasons to use Passive Voice:

- Your field may prefer its use, especially in describing research design and experimental activities.
- You need to preserve coherence from sentence to sentence.

Visual Aids

- Incorporate charts, graphs, diagrams, illustrations, etc., wherever possible, permissible, or practical.



Good luck

