

# Methodology

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- **Very important** part of research proposal → should receive a lot of attention
- Explain clearly **how** you will conduct your study
  - enable reviewers to **evaluate** the work to be performed
  - permit others to **replicate** your study
- **Balance** between **brevity and completeness**

### Research design and methods:

- Overall design
  - Methods and techniques
  - Methods of analysis
  - Risks, anticipated pitfalls, and plans to overcome
- >
- Proceed from broad to specific
  - Provide context is before specific details are raised
  - Use flow chart to explain overall methodology as necessary

## Purpose of Research Design / Methodology

- outlines *How* the research will be **conducted**
- identifies **what** type of data will be **collected**
- identifies **how** the data will be **collected**
- identifies **how** the data will be **analysed**
- states any **limitations** in regard to size of the project, the time available etc.

- Methodology section can be difficult and complicated → Use several **subsections** to make it easy to follow
- Be **specific** about the means of evaluating data, conducting the analysis
- **Justify** and explain your **choice** of methods and parameters
- If new, risky or **unorthodox** methods are proposed → include **adequate justification**, cite references
- **Anticipate questions** / objections of reviewer → provide answers pre-emptively as far as possible
- Make evident **connections** between research **objectives** and research **methods**

- Clear and sufficiently complete → others could repeat the work
- Assemble a simple collection of procedural outlines → turn this into prose
- Use future tense in methodology section in the proposal
- Provide references as necessary
- Use subheadings if necessary
- Do not include results in Methods
- Use figures to illustrate and clarify methods

- For chemicals → exact technical specifications, source or method of preparation  
→ Avoid trade names of chemicals
- Describe statistical tests & comparisons made
- For every result there must be a method

### Reviewers:

- Will study methodology carefully
- Decide whether the results can be trusted or not
- Can reject based on methodology

## Example from FRGS Detailed proposal of research project

**(a) Research background including Hypothesis /Research Questions and Literature Reviews**

**(b) Objective(s) of the Research**

**(c) Methodology**

*Description of Methodology*

*Flow Chart of Research Activities ( Please enclose in the Appendix)*

*Gantt Chart of Research Activities (Please enclose in the Appendix)*

*Milestones and Dates*

**(d) Expected Results/Benefit**

*Novel theories/New findings/Knowledge*

*Research Publications*

*Specific or Potential Applications*

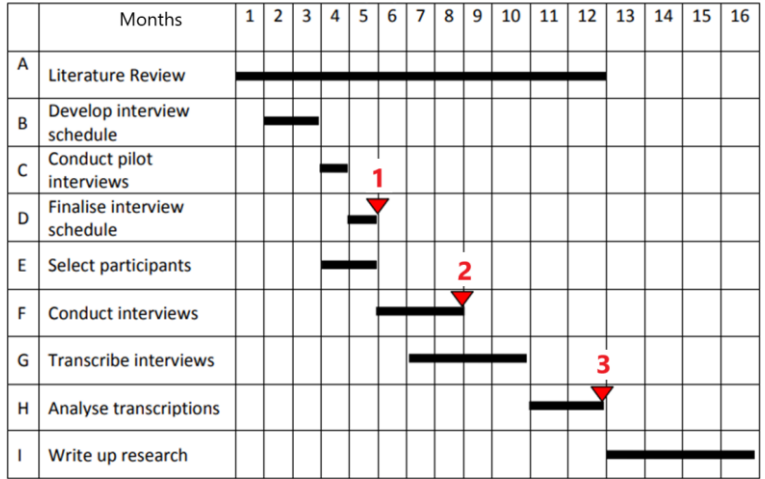
*Number of PhD and Masters (by research) Students*



## Milestones

Signposts along the route to project completion

- help to monitor progress
- measure how far we have come / how near we are to completion
- written as if it is achieved



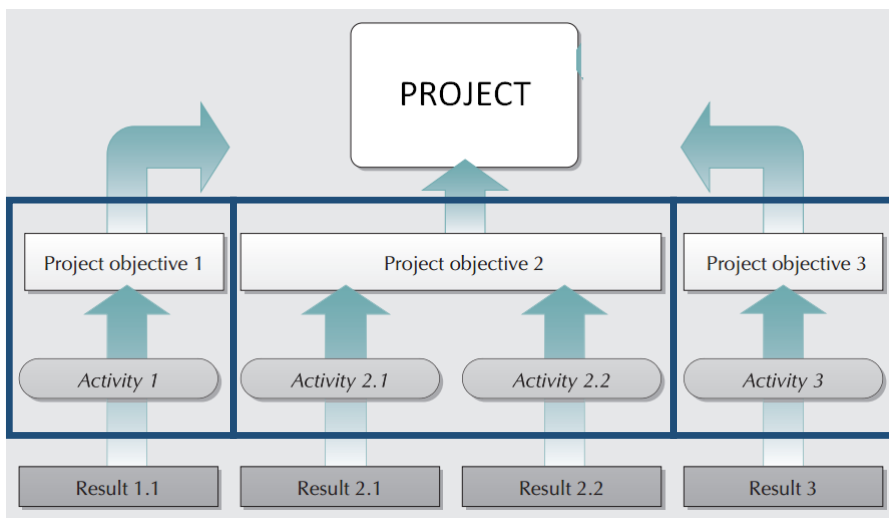
▼ = Milestones

Milestone 1: Interview schedule finalised

Milestone 2: Interviews complete

Milestone 3: Analysis of transcriptions done

## Each objective can be broken down to activities



# Summary