U O W

Research Methodology

Research Proposal

UNIVERSITY OF WOLLONGONG AUSTRALIA

What is a research proposal

- A research proposal explains the nature and extent of your planned or future research. It is written for an academic reader e.g. for your supervisor or an academic with a similar disciplinary background. By thinking through your entire research project from beginning to end, it may also highlight core issues with potential research methods, clear plan and the feasibility of the project.

- Serves as a useful basis as a guideline for the researcher.

What is a research proposal

- A research proposal should present your idea or question and expected outcomes with clarity and definition – the what.

- It should also make a case for why your question is significant and what value it will bring to your discipline – the why.

- What it shouldn't do is to answer the question – that's what your research will do.

UNIVERSITY
OF WOLLONGONG
AUSTRALIA

Why it is important

- Research proposals are significant because it formally outlines your intended research. Which means you need to provide details on how you will go about your research, including:

  - your approach and methodology

  - timeline and feasibility

  - all other considerations needed to progress your research, such as resources.

- Think of it as a tool that will help you clarify your idea and make conducting your research easier.

What is in a research proposal

- A research proposal includes the following essential parts:
  1. The background of research.
  2. The statement of the problem.
  3. The critical review of literature or theoretical framework of the study.
  4. The research problems and hypotheses.
  5. Aims and objectives.
  6. The methodology and procedure of the study.
  7. Implications or significance of the problem.
  8. Work schedule.
  9. References
  10. Budget and resources.

Introduction including a literature review

- The proposal should start with an introduction to include some of the information listed below.

- In writing this section, the literature review is of central importance as it serves two main functions:

  – With the available literature in the area of your study, broaden your knowledge base.

  – With information on the methods other people have used in similar situations, you know what works and what does not.

The Critical Review of Related Literature

- A summary of previous research to understand what is already known and with what is still unknown and untested.

- Helps to eliminate replication of what has been done.

- Provides useful basis for the formulation of research problem (or hypotheses) and deciding the methodology of the study.

- Helps to determine whether the proposed research is significant.

The Statement of the Problem

- Identify the gaps in the existing body of knowledge.

  - Identify the unanswered questions.

- Identify the issues that are the basis of your study;

- Identify what knowledge is available concerning your questions,

- Specifying the differences of opinion in the literature regarding these questions if differences exist,

- Develop a rationale for your study with particular reference to how your study will fill the identified gaps.

The Hypotheses

- A hypothesis is a statement of your assumptions about a phenomenon or about a relationship between two variables that you plan to test within the framework of the study.

- A scientific study is based on hypotheses.

- The hypothesis indicates the expected outcomes of the investigation.

- The hypotheses should be first stated in positive form.

- With the hypotheses, objectives of the study can be written to indicate the direction of the research work.

Objectives of the study

- Main objectives and sub-objectives.
  - Your main objective indicates the central problem of your study
  - whereas the sub-objectives identify the specific issues you propose to examine.
- The objectives of the study should be clearly stated and specific in nature.
  - Each sub-objective should address only one issue.
  - Use action-oriented verbs such as 'to determine', 'to find out' and 'to ascertain' in formulating sub-objectives, which should be numerically listed.
  - If the objective is to test a hypothesis, you must follow the convention of hypothesis formulation in wording the specific objectives.

Objectives of the study

- In qualitative studies the statement of objectives is not as precise as in quantitative studies.

    – In qualitative studies you should simply mention an overall objective of the study as your aim is to explore as much as possible as you go along.

    – The strength of qualitative research is in flexibility of approach and the ability to incorporate new ideas while collecting data.

Question: What are the special challenges that students who are born in Germany and have an immigrant background face?

Generally, this question can serve as basis for a qualitative study but it needs some further clarification.

In Germany, we have immigrants from lots of different backgrounds: (people from Turkey, Russia and the successor states of the former Soviet Union, Poland, successor states of the former Yugoslavia, Italy, Greece, etc. Some are Muslims, some are Catholics and others are atheists.)

And they came for different reasons: work, war, breakdown of communism or having German ancestors. Hence, it is to expect that each group faces different challenges. It is thinkable to design a study where all groups are included, but this would be very large and extensive qualitative research project. The advice here is to narrow the question to one particular group of immigrants.

Methodology and Procedure of the Study

- This part of the proposal outlines the entire research plan.

- Under this part of the proposed method, sample, population, tools and statistical analysis techniques are described in view of testing the formulated hypotheses.

- It describes just what must be done, how it will be done, what data will be needed,

  - what data-gathering devices will be employed,

  - how sources of data will be selected, and

  - how the data will be analysed and conclusions be drawn.

Methodology and Procedure of the Study

- How to answer your research questions?
  - For example, say whether it is a case study, descriptive, experimental or non-experimental design.
- How to carry out the research to fill the gap?
- Describe potential tools and methods to be adopted.
- How are you going to validate your finding and method?
- How are you going to show the applicability of our findings?

Ethical issues

- <u>Ethics</u> are broadly the set of rules, written and unwritten, that govern our expectations of our own and others' behaviour.

- Effectively, they set out how we expect others to behave, and why. While there is broad agreement on some ethical values (for example, that murder is bad), there is also wide variation on how exactly these values should be interpreted in practice.

- <u>Research ethics</u> are the set of ethics that govern how scientific and other research is performed at research institutions such as universities, and how it is disseminated.

Ethical issues

- All academic institutions are particular about any ethical issues that research may have.

- To deal with them, all institutions have some form of policy on ethics.

- Identify any ethical issues and describe how you propose to deal with them.

- You need to look at the ethical issues particularly from the viewpoint of your respondents,

  – in case of any potential 'harm', you need to detail the mechanism in place to deal with it.

The Importance of Research Ethics

- They promote the aims of research, such as expanding knowledge.

- They support the values required for collaborative work, such as mutual respect and fairness. This is essential because scientific research depends on collaboration between researchers and groups.

- They mean that researchers can be held accountable for their actions. Many researchers are supported by public money, and regulations on conflicts of interest, misconduct, and research involving humans or animals are necessary to ensure that money is spent appropriately.

- They ensure that the public can trust research. For people to support and fund research, they have to be confident in it.

- They support important social and moral values, such as the principle of doing no harm to others.

Work Schedule

- Set yourself dates as you need to complete the research within a certain time-frame.

- List the various operational steps you need to undertake and indicate against each the date by which you aim to complete that task.

- Develop a chart of timetable

A Timetable

Tasks (Any tasks which you consider important)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
			To be completed by (weeks or months)												
Proposal writing	→→→→→														
Instrument construction		→→→→													
Data collection				→→→→											
Coding						→→→									
Data analysis									→→→						
Report/first									→→→→→→→→						
Report/final											→→→→				
Typing												→→→→			

Gantt chart

Task Name	Q1 2019			Q2 2019		Q3 2019
	Jan 19	Feb 19	Mar 19	Apr 19	Jun 19	Jul 19
Planning		▬	▬			
Research		▬	▬			
Design			▬	▬		
Implementation				▬	▬	
Follow up					▬	▬
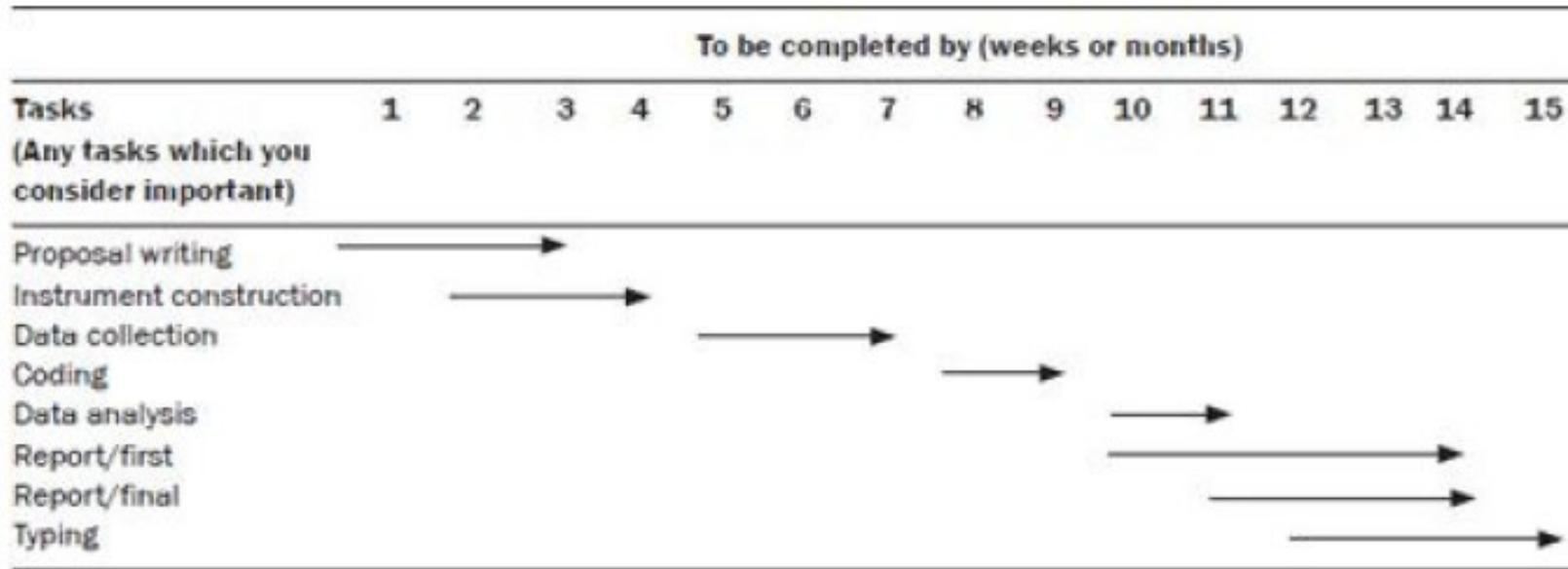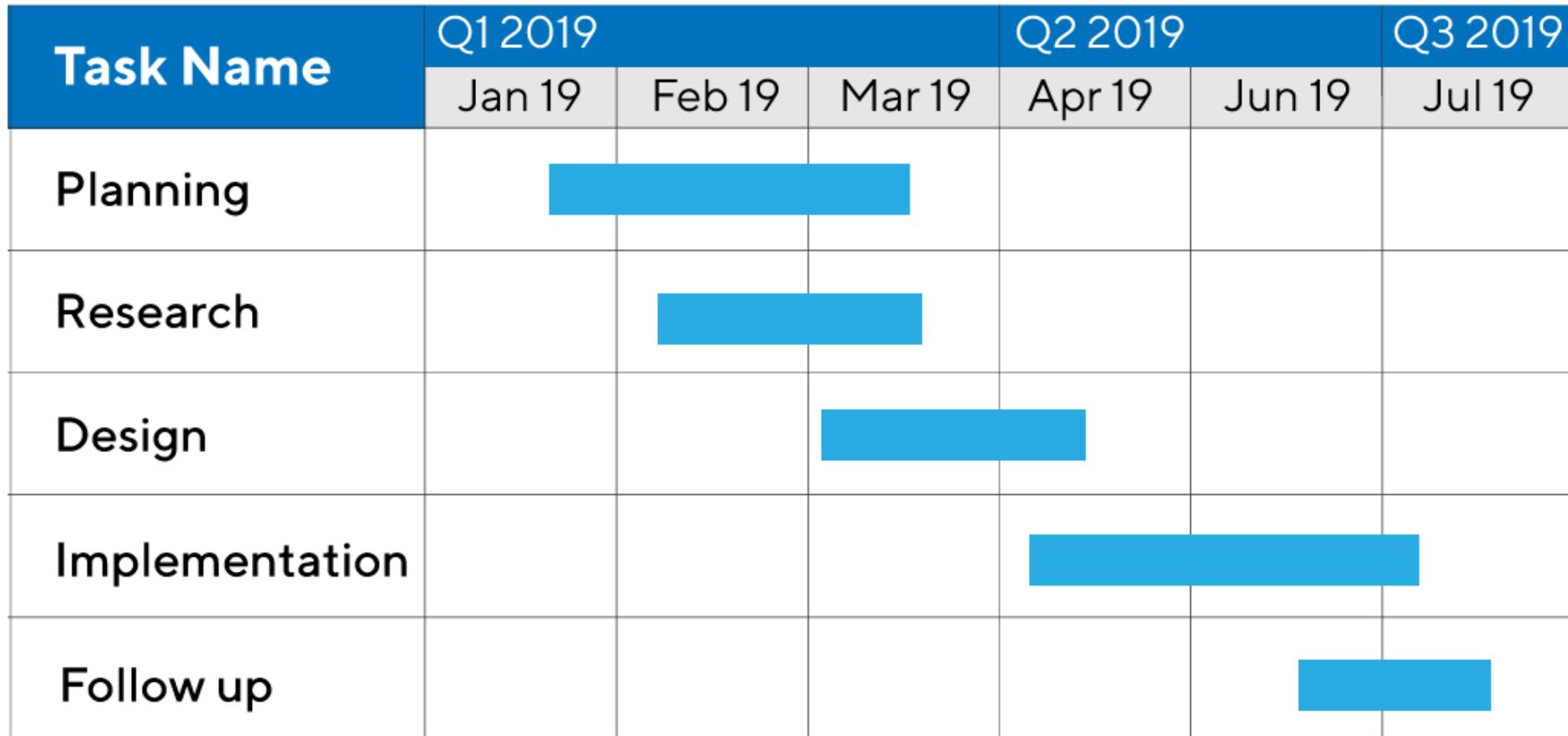
Timetable

TABLE 5: SURVEY TIMETABLE

DATE	ACTION
5 January – 5 February	Literature search Primary research (talk to relevant people)
6 February – 7 March	Develop and pilot questionnaire Continue literature search
8 March – 9 April	Analyse pilot work and revise questionnaire Ask relevant people for comments
10 April – 21 April	Send out questionnaire Categorise returned questionnaires
21 April – 1 May	Send out reminder letter for non-responses. Continue to categorise returned questionnaires.
1 May – 1 July	Data input Data analysis
2 July – 3 August	Write report Prepare oral presentation

References

- The last part of the proposal provides the list of references in the form of bibliography which includes books of research, journals, conference proceedings, etc.

Budget and resources

- If applying to a funding body you need to think about what you will **need** for your research and how much this is likely to **cost**.

- If you are a student you may not have to include this section in your proposal.

- If you're on a limited budget you will have to think about this when deciding upon your research method.

Checklist

A. Salaries and Wages

1. Academic personnel
2. Research assistants
3. Stipends (training grants only)
4. Consultants
5. Interviewers
6. Computer programmer
7. Data managers or analysts
8. Administrators
9. Editorial assistants
10. Technicians
11. Study/clinical coordinators
12. Hourly personnel
13. Staff benefits
14. Salary increases in proposals that extend into a new year, e.g., Cost of Living increases
15. Vacation accrual and/or use

B. Equipment

1. Fixed equipment
2. Movable equipment
3. Office equipment
4. Equipment installation

C. Materials and Supplies

1. Office supplies specifically for project
2. Communications
3. Test materials or samples
4. Questionnaire forms
5. Data access
6. Animals
7. Animal care
8. Laboratory supplies
9. Glassware
10. Chemicals
11. Electronic supplies
12. Report materials and supplies

D. Travel

1. Professional conferences
2. Field work
3. Sponsor meetings
4. Travel for consultation
5. Consultants' travel
6. Mileage for research participants
7. Subsistence
8. Automobile rental
9. Aircraft rental
10. Ship rental

E. Services

1. Computer use/data storage
2. Duplication services (reports, etc.)
3. Publication costs
4. Photographic/graphic services
5. Service contracts
6. ISR services (e.g., surveys)
7. Data analysis

F. Other

1. Space rental
2. Alterations and renovations
3. Purchase of data, periodicals, books
4. Subjects/Research participants
5. Patient reimbursement
6. Tuition and fees
7. Hospitalization
8. Subcontracts

More:

https://www.dartmouth.edu/~osp/docs/resources_docs/preparing_a_budget_14_v1_10-16-13.pdf

http://www.health.gov.on.ca/en/pro/ministry/research/docs/hsrf_target_research_budget_example.pdf

https://theresearchwhisperer.wordpress.com/2014/10/07/simple-research-budget/

Example of Budget

Year 1

Description	ARC	Admin Org	
	Cash	Cash	In-kind
Total	156,648	34,846	118,584
Personnel	127,218	26,846	102,084
			66,501
			35,583
	101,812	1,440	
	25,406		
		25,406	
Travel	7,000	7,500	
	2,500	2,500	
	2,000	2,500	
	2,500	2,500	
Equipment	18,430		
	16,701		
	1,729		

What makes a good proposal

- The research is unique, or offers new insight or development. The title, aims and objectives are all clear.

- Comprehensive and thorough background research and literature review has been undertaken.

- There is a good match between the issues to be addressed and the approach being adopted.

- The researcher demonstrates relevant background knowledge and/or experience.

- Timetable, resources and budget have all been worked out thoroughly.

- Useful practice implications.

Tips for writing

- Avoid language that is overly hesitant or tentative (i.e. 'It seems that…', 'It is hoped that …'). Instead, use confident language when you feel able to (i.e. 'It is clear that…', 'I assert that …').

- Break up large blocks of text into smaller sections using sub-headings and bullet-points.

- Anticipate possible problems with, or limitations of, your research. Address these issues directly for your own benefit as well as to improve the entire proposal.

- Make your proposal is easy for readers to skim read. Never assume your readers will read your work in a 'logical' order. Use sub-headings and restate key ideas to guide the reader through your writing.

Tips for writing

- Find copies of other Research Proposals in your field and study the way they:
  - devise titles.
  - structure their proposal.
  - use discipline-specific language.
- Take a note of anything else you notice. You might ask your potential supervisor/s for models of previously submitted proposals or search for relevant examples online (look for examples from reputable .edu or .org. web addresses)

Some examples

http://www.cs.unc.edu/~cssa/guides/proposals/

https://uq.edu.au/student-services/pdf/learning/research-proposal-sample-v2.pdf