



Review Article

Crafting a Convincing Research Proposal: A Guide to Writing Successful Funding Applications

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ABSTRACT

Writing a research proposal for funding is a crucial skill for researchers seeking to secure financial support for their projects. A well-drafted proposal can convince funding agencies about scientific, commercial and social impact of the research project and also researcher's competence and skill. However, crafting a persuasive proposal is always challenging, and many researchers struggle with where to start and how to structure the proposal. This manuscript aims to provide a comprehensive guide for writing a research project proposal for funding. It discusses the key elements involved in the research process and outlines the essential components of a persuasive research proposal. It provides a helpful guidance on how to hone in on a research question, pinpoint a knowledge gap, and define specific goals for the study. It also explores different research methodologies and provides guidance on how to select the most appropriate approach for a given research project. It further provides tips on how to structure the proposal effectively, including the use of clear and concise language, and the inclusion of relevant and compelling supporting evidence. In conclusion, it will serve as a thorough and practical resource for anyone looking to secure financial backing for their next research endeavor. Our endeavor is to provide invaluable tool for scientists who are applying for grants or seeking funding for their research endeavors.

Keywords: Research proposal; Well-crafted proposal; Manuscript; Writing; Comprehensive guide

INTRODUCTION

The proposal for a research project is a formal document that describes the intended study. The primary goal of this documentation is to persuade peers or funding agencies or academic superiors that the research endeavor is desirable, promising, and well-planned.¹ A well-written research proposal will convey the study's relevance, goals, and methodology effectively to the reviewers. Timelines, resources, and expected results for the research should all be spelt out in certain terms in introduction section.²

To effectively convince others of the merit of a research proposal, it is essential to address key questions related to the proposed research.³ First and foremost the proposal must state precisely and comprehensively, what the research's objectives are. This entails specifying the study's precise aims and objectives as well as the research issue or problem. It is crucial to express the research's significance effectively,

emphasizing the reasons why it is crucial to carry out the research and how it would advance the existing knowledge in the field.⁴

Second, the proposal needs to make it abundantly obvious why the study is worthwhile. Specifically, this entails defining the research need or gap that the proposed study fills and articulating how the research project will fill this gap or advance the body of knowledge in the relevant discipline.⁵ This may entail conducting an indepth literature review, which should critically assess prior research in the field of relevance and highlight any shortcomings or holes that the proposed study will fill.⁶

Finally, the proposal must specify how the research will be undertaken. The research methodology must be described, including the research design, data collection procedures, and analysis strategies.⁷ The proposal should also provide a detailed plan for managing resources and timelines, as well as any potential challenges or limitations that may arise during

the research process.⁸

A well-written research proposal should clearly and persuasively answer the questions of what the research aims to accomplish, why it is worthwhile to accomplish it and how it will be carried out.^{5,9} The proposal can persuade others of the viability and importance of the proposed study by outlining a clear and thorough plan for the research effort.¹⁰ A brief explanation of the stages involved in developing a research proposal is discussed below:

THE FUNDAMENTAL ABILITY OF A RESEARCHER

Because a research proposal is a thorough and organized document outlining the research endeavor one intends to undertake, writing demands a particular level of language expertise and presentation skill.¹ A research proposal's goal is to persuade others—such as funding organizations, academic advisers, or research partners—that the research endeavor is important and plausible.¹¹

Some of the abilities required to write a research proposal includes, the ability to determine the main research questions, objectives, and methods for the project. One should also be keen and capable to locate pertinent literature and prior research that is connected to the issue proposed to be investigated.¹²

Writing skills

The Scholar must be competent enough to write clearly and effectively communicate the ideas and convince readers of the importance and feasibility of the research project.¹³

Critical thinking skills

The Scholar must be able to objectively assess the advantages and disadvantages of the proposed study endeavor and foresee any ensuing difficulties or constraints.¹⁴

Organizational skills

The scholar must be able to structure the proposal in a logical and coherent manner, with clear headings and sub-headings that guide the reader through the research project.¹⁵

Time management skills

To fulfill the deadline for submitting the proposal, the scholar must be able to properly plan and prioritise the work.¹⁶

In nutshell writing a research proposal requires a range of skills enumerated above, which are essential to produce a high-quality proposal that is likely to be accepted by funding agencies or academic supervisors.¹⁷

FUNDING CALL

A funding call, also known as a funding opportunity or funding announcement, is a public notice or invitation from a funding organization or agency inviting individuals, organizations, or institutions to apply for funding for a specific research, innovation, or development project. Funding calls are typically issued by government agencies, non-profit organizations, foundations, or private companies, and are aimed to support research, innovation, and development in specific areas of interest or priority.^{18,19}

Funding calls usually have a specific theme, topic or research area, and provide detailed instructions on the application process, eligibility criteria, submission deadlines, and evaluation criteria. The funding agency or organization sets aside a specific amount of money to support the research or innovation project and outlines the amount of funding available, the duration of the project, and any specific requirements or expectations for the funded project.^{20,21}

Individuals or organizations who are interested in the funding opportunity must submit a proposal or application that meets the requirements and guidelines outlined in the funding call.²² Funding calls may be competitive, with a limited number of awards available, and often undergoes a rigorous evaluation process to determine the most deserving projects to fund.²³

Responding a funding call

In order to respond to a funding call, one must first thoroughly study and comprehend its guidelines and requirements, then write and submit a proposal or application that complies with those guidelines and requirements.²⁴ Following are the general guidelines and steps that can help in responding to funding call:

Reading the funding call

The funding call document must be read carefully to understand the objectives, eligibility criteria, application requirements, and submission guidelines.²⁵

Identifying the fit

It must be determined that the proposed research, innovation or development project falls within the ambit and focused goals of the funding call.²⁶

Developing a proposal

A clear and concise proposal must be developed that outlines the research, innovation, or development project. The proposal should address the key elements of the funding call, such as research questions, methodology, expected outcomes, and evaluation criteria. It should also include a detailed budget, timeline, and plan for managing and completing the project if funded.²⁷

Seeking feedback

Research is inevitably a team work and needs diverse skills and expertise in experimental and analytical domain. Hence consultation with coworkers, advisors, or mentors to get their input on the scheme and proposals is essential to make sure that it adheres to the funding call's standards and is clear and thorough.²⁸

Proposal submission

The procedures and requirements provided in the funding call must be followed for submitting the proposal before the deadline. Ensuring that all necessary documents, contact information and supporting papers, have been included and checklist if any has been duly filled.²⁹

FOLLOW UP

After submitting the proposal, one must get in touch with the funding agency to follow up and ascertain the time frame and procedure for evaluation.³⁰

Thus responding to a funding call requires careful planning, focused attention to details, and a clear understanding of the requirements and guidelines of the funding call.

STRUCTURE OF A RESEARCH PROPOSAL

The format of a research proposal might change based on the specifications of the funding agency or academic institution, the type and extent of the planned research, and other factors.¹⁰ A research proposal generally has a few standard components namely,

1. Cover letter
2. Title
3. Abstract/Summary
4. Introduction
5. Problem statement
6. Objectives of the study
7. Review of the Literature and Patentability
8. Methodology (Description of the project)
9. Research plan – schedule of activities
10. Expected outcomes
11. Budget and justification
12. References
13. Research team
14. Benefits for the society

Cover letter

A formal letter that accompanies research proposal and gives the receiver minute details about the research topic is known as a cover letter for a research proposal submission. Its goal is to identify the researcher, describe the motivation behind and scope of research, and offer any other details the recipient might find interesting.³¹ It must be professionally crafted, succinct, and well-written in order to give the

reader a clear grasp of your research endeavour and its importance.³²

The key components of a cover letter for a research proposal submission include, introduce yourself and your research endeavour at the outset of your letter. Briefly describe your study topic to the and explain why it is significant and pertinent.³³

The proposal's goal

Describe the goals of your research endeavour and the aim of your research proposal. This could include identifying a gap in the existing knowledge, testing a new hypothesis, or developing a new method.⁵

Relevance

Explain to the recipient—whether it's a financial organisation or an academic supervisor—how your research endeavour is important to them. This may be exhibited by highlighting how your research aligns with their priorities or interests.³⁴

Brief summary

Provide a succinct overview of your study project, including the objectives, methods, and anticipated results.³⁵

Acknowledgments

Acknowledge any support you have received in the development of your research proposal, such as funding or assistance from colleagues.³⁶

Contact information

Provide your contact information, including your email and phone number, in case the recipient has any questions or needs to contact you.³⁷

Title

The aim and scope of the proposed research project should be clearly and succinctly expressed in the title of the research proposal.³⁸ It should reflect the planned research project in a clear, succinct, explicit, and accurate manner.

Some useful suggestions for writing a research proposal's title include:

Be concise

Keep the title short and to the point. A good title is typically no more than 15 words long.³⁹

Be specific

The proposed research project's focus should be correctly reflected in the title, which should also make it obvious what research topic or issue the study is trying to solve.⁴⁰

Use keywords

Employ keywords in the title to make it easier for readers and funders to understand the subject or field of study. Keywords may refer to particular theories, concepts, or research methodologies that are pertinent to the research that is being presented.⁴¹

Avoid jargon

Avoid using technical or discipline-specific terms that may not be familiar to a general audience. The title should be easily understandable to a wide range of readers.²⁹

Be catchy

A good title can capture the attention of potential readers or funders, so consider using a title that is catchy or interesting, without sacrificing accuracy or clarity.⁴²

Revise

Once you have drafted a title, revise it as necessary to ensure that it accurately reflects the proposed research project, as also clear and concise.⁴³

Abstract/summary

A research proposal's abstract or summary is a succinct explanation of the proposed research study that is typically between 250 and 300 words long.⁴⁴ It should give a succinct and clear description of the planned research project, including the research question or problem, the research methodologies to be employed, the anticipated results, and the potential impact of the research.⁴⁵

The following advice will help you create a compelling abstract for a research proposal:

Start by stating the research problem or question clearly

The research question or issue that the proposed research attempts to solve should be stated in the opening sentence of the abstract in a clear and succinct manner.⁴⁶

Explain the planned research in general

The abstract should give a quick explanation of the proposed research, including the research methodologies to be used, the anticipated results, and the research's potential impacts.⁴⁷

The abstract should highlight the significance of the planned research and how it will add to the body of knowledge already known in the topic.⁴⁸

Include key words

Use key words in the abstract that will help readers to identify the topic or area of research, and that reflect the main themes or concepts of the proposed research.⁴⁹

Keep it concise

The abstract should be brief, clear, and concise. Avoid unnecessary technical terms or jargon, and keep the language simple and accessible.⁵⁰

Revise

Once you have drafted the abstract, revise it as necessary to ensure that it accurately reflects the proposed research project, and is clear and concise.⁵¹

Introduction

A study proposal's introduction, which comes first, establishes the tone for the rest of the document. It gives a succinct description of the research problem, specifies the question and goals of the study, and emphasises the importance of the suggested research.⁵² A well-written introduction can capture the attention of the reader and increase the chances of securing funding or support for your proposed research project.⁵³ Some guidelines for crafting introduction part of a research proposal are enumerated below:

Background information

Provide a brief introduction to the study topic's history. This should provide a concise synopsis of the subject's prior research as well as any earlier studies or research efforts.⁵⁴

Research issue

Indicate the research issue in detail together with its significance. This needs to be a succinct statement that identifies the precise need or gap that will be filled by the proposed research.⁴⁸

Goals and research question

Describe the major research question and the project's goals in detail. This should be a succinct, straightforward statement that sums up the intended research.⁵⁵

Importance of the study

Describe the significance of the proposed research and how it will advance the wider industry or field. This can involve the possible influence of the research on present procedures, the creation of novel goods or services, or the expansion of specialised knowledge.⁵⁶

Research methodology

Describe the research approach that will be utilised to answer the research question and meet the study objectives in a succinct manner. A summary of the research design, data collecting and analytic methods, and any potential restrictions or difficulties that might have an impact on the study should be included.⁵⁷

Summary

Finish the introduction with a succinct overview of the proposed research and a sentence outlining the significance of the research topic.

Problem statement

The problem statement should give the context and justification for the proposed research plan. It is an important part of a research proposal.⁵⁸ The following advice will help in creating or crafting a problem statement for a research proposal that is effective.

Research issue

Determine the issue or problem that the planned research will attempt to solve. This can entail looking over pertinent literature, speaking with subject experts, or carrying out a preliminary study.

Description of the issue

The problem statement needs to be focused, precise, and brief. The problem should be briefly described, along with an explanation of its significance and applicability.

Problem's importance

Describe the significance of the issue and how it relates to the literature or professional practice in the area. Indicate the potential effects of solving the issue and the significance of doing so.⁵⁹

Examples to back up

To demonstrate the problem's size and scope and to support the problem statement, use data, statistics, or examples.

Study topic and objectives

The suggested research's problem statement should logically follow the research question and objectives. It should detail how solving the issue will help reach the study's goals and how the proposed study will close a gap in the body of knowledge or field of practice.

Revise and refine

Once the problem statement has been created, it should be revised and refined as necessary to make sure it accurately captures and conveys the issue and offers a convincing justification for the suggested study.

The research challenge, its significance, and its relationship to previous research or professional practice in the subject should all be clearly and succinctly described in the problem statement.⁶⁰

Objective of the study

The objectives of a research proposal must lay out the precise aims and results that the project's proposal seeks

to accomplish.⁶¹ Guidelines for crafting strong research proposal objectives are enumerated below:

The objectives should be closely related to the research question or problem statement. Begin with a clear and detailed research topic. Determine the precise results that the research wants to reach after first identifying the research issue or problem.

Be precise and quantifiable

The goals must be precise and quantifiable so that it is obvious whether or not they have been accomplished. Avoid using ambiguous or generic terminology and speak clearly and precisely.

Describe the exact acts or tasks that the research attempts to complete using action verbs. Consider the verbs "investigate," "analyse," "compare," and "evaluate," among others.

Align objectives with research methodology

Verify that the objectives and research methodology are in line with one another, and specify the precise data collection and analysis methods that will be used to each objective.⁶²

Prioritize your goals

Sort your goals according to importance or relevance. Verify that the goals can be attained within the budget and time frame suggested.

Think about the study's potential impact

Indicate the potential effects of completing the goals and how the research will further our understanding or practice of the subject.

Once the objectives have been drafted, you should review and improve them as necessary to make sure they are precise, measurable, and doable.

The goals of a research proposal should be clear, precise, measurable, and feasible, and they should outline the precise results that the research is intended to achieve.⁶³

Review of the literature and patentability

A study proposal must include a review of the literature since it gives a critical summary of the pertinent research that has previously been done on the subject.⁶⁴ The useful guidelines for crafting a strong literature review for a research proposal comprises:

A clear research question or problem statement as the first step in any review of the literature because it will be strongly related to it. For this reason, it is crucial to grasp the question or problem in detail before starting the review.

Comprehensive search of relevant literature

Conducting a thorough search of academic databases, journals, books, and other relevant sources to identify

relevant research articles and studies is a must. Taking note of key authors and researchers in the field help to evolve direction of proposed research.

Setting the literature in order

Based on the study topic or problem statement, the literature should be grouped into themes or categories. The literature review should be divided into sections using headings and sub-headings, with clear transitions between each component.

Literature analysis

Analyze the research studies and articles critically to determine their advantages and disadvantages. Evaluate the effectiveness of the research design, data collection procedures, and analytical methods.

Gaps in the body of knowledge

Determining the research gaps helps in planning study that will attempt to fill those gaps. Describe how the planned research will help to close the gaps.

Summarize and synthesize the literature

Summarize the key findings from each study utilizing the conclusions and synthesize the literature to provide an overview of the current state of knowledge in the field.⁶⁵

Consistent referencing style

Cite the literature review's sources according to a consistent referencing system. Be certain that every source is properly attributed and referenced.

Revise and refine

Once the literature review has been written, make necessary revisions and refinements to be sure that it appropriately reflects the current level of knowledge in the subject and offers a convincing justification for the proposed research.

Patentability refers to the potential for an invention or innovation to be granted a patent. If the research proposal involves the development of a new product, technology, or process that is believed, could be patented, it may need to include a section on patentability in the proposal.⁶⁶

Innovation or invention

Start by clearly defining the innovation or invention that you believe could be patented. Describe the specific features and benefits of the invention or innovation, and how it differs from existing products, technologies, or processes in the field that makes it suitable for commercial exploitation.

Patent search

Conduct a search of relevant patents to determine if any similar inventions or innovations have already been patented. This will help you assess the potential patentability

of your proposed invention or innovation, and craft your strategy for innovating the existing product.

Identify novel and non-obvious features

Identify the novel and non-obvious features of your proposed invention or innovation. These are the features that could potentially be patented, as they are not obvious to someone skilled in the field, and are not already covered by any existing patent.

Commercial applications

Describe the potential commercial applications of your proposed invention or innovation, and how it could be used to solve specific problems or meet specific needs of the industry or the market.

Potential challenges

Discuss any potential challenges or obstacles to obtaining a patent for your proposed invention or innovation. This could include issues related to prior art, patentability criteria, or competing patents.

Consultation with a patent attorney

Consider consulting a patent attorney to assess the potential patentability of your proposed invention or innovation, and to help you navigate the patent application process.

The review of the literature should give a critical overview of the pertinent research on the subject and point out any gaps in the body of knowledge that the proposed study intends to fill. The possible patentability of a proposed invention or innovation should be discussed in the patentability part of a research proposal, including any innovative and non-obvious features, potential commercial uses, and any potential barriers to obtaining a patent.⁶⁷

Methodology

The methodologies and procedures that will be used to conduct the research should be fully described in the methodology part of the funding proposal.⁶⁸ It is crucial to have a firm grasp of the issue or problem before starting the methodology section since the methodology should be closely related to the question or problem statement. The followings are some guidelines for drafting methodology in a funding request.

Study methodology

Explain the research methodology, including the study's cross-sectional or longitudinal design, observational or experimental approach, and other factors. Explain the reasoning behind the selected design and how it will aid in addressing the research question or problem statement.

Study population

Identify the study population, including any inclusion and exclusion criteria. Describe how the study population will be recruited, and how the sample size will be determined.⁶⁹

Data collecting techniques

Include any survey instruments, interview procedures, or other data collection tools in your description of the data collection techniques that will be employed. Explain the reasoning behind the methodologies selected and any steps that will be taken to assure the accuracy and dependability of the data.

Data analysis strategy

Describe the plan for data analysis, including the statistical methods that will be employed. Give a rationale for the chosen methodology, and define how the results will be presented.

Ethical considerations

Address any ethical considerations that may arise in the research, such as issues related to informed consent, confidentiality, and privacy. Describe any measures that will be taken to ensure that the study is conducted ethically and in accordance with relevant regulations.

Timeline

Provide a timeline for the research project, including key milestones and deadlines for data collection, data analysis, and reporting of results.

Potential limitations

Consider any potential limitations of the study, and describe how these limitations will be addressed.⁷⁰

Research plan

Any research proposal must include a research plan or a timetable of events. It describes the precise tasks that will be performed throughout the study endeavour and the deadline for finishing each task.⁷¹ Following are some guidelines for drafting a research proposal's study plan or schedule of activities:

Enquiry for the research

The research question and objectives should serve as the foundation of the study plan. Restate the study question and briefly state the primary goals to start.

Research activities

Identify the specific activities that will be conducted to achieve the research objectives. This could include data collection, data analysis, literature review, and dissemination of findings. Each activity should be described in detail.

Duration of each activity

Estimate the time required to complete each activity. Be realistic and take into account potential delays, such as unexpected difficulties in data collection or equipment malfunctions.

Timeline

Create a timeline that shows when each activity will be conducted and how long it will take. This can be presented in a table or a Gantt chart, which is a visual tool for tracking progress and identifying potential delays. Figure 1 shows a sample of Gantt chart.⁷²

Prioritize activities

Prioritize the activities in order of importance and sequence. Ensure that activities are conducted in a logical order and that earlier activities are completed before moving on to later activities.

Allocate resources

Identify the resources required for each activity, including personnel, equipment, and funding. Ensure that resources are available and allocated appropriately.

Monitor and adjust the plan

The research plan should be a living document that is monitored and adjusted as needed throughout the research project. Regularly review progress and adjust the timeline and activities as necessary. A clear research plan can help you stay on track, allocate resources effectively, and complete your research project on time.⁷³

Expected outcomes

Expected outcomes are an important part of any research proposal. They aid in articulating the research's prospective impacts and proving the worth of the suggested research project.⁷⁴ Following are some guidelines for creating a study proposal's section on predicted outcomes:

The expected results should be based on the study question and objectives, therefore identify them. Restate the study question and briefly state the primary goals to start.

Potential impact

Explain the potential impact of the research in terms of the broader field, industry, or society. Will the research contribute to new knowledge, improve current practices, or address a pressing social or economic issue?

Specific outcomes

Provide a list of specific outcomes that the research is expected to achieve. These could include new knowledge, new methods or approaches, new insights or perspectives, or the development of new products or services.⁷⁵

Achieving the outcomes

Describe how the study will produce these results. Explain the methods, data analysis techniques, and study design that will be used to produce the desired results.

Quantify outcomes

Quantify the predicted results if at all possible. Estimate the possible cost savings or income creation that the research could produce, for instance, if it is anticipated to improve a certain procedure or product.

Potential challenges

Acknowledge potential challenges that may impact the achievement of the expected outcomes. Discuss how you plan to mitigate these challenges or adjust the research plan if necessary.

Importance of anticipated results

In the end, emphasise the importance of the anticipated results and how they will benefit the larger field, industry, or society. Highlight the research's potential impact and the significance of continuing the effort.

This can boost the likelihood of obtaining money or other forms of support by demonstrating the research project's potential worth.⁷⁶

Budget and justification

It is crucial to include a thorough and practical plan for how the proposed research project will be supported when developing a budget and justification for a research proposal.³ Following are some guidelines for developing a research proposal's budget and reasoning section:

Primary expense categories

To start, determine the primary expense categories needed to carry out the research. They may include the cost of the research project's staff, tools, supplies, travel, and other costs.

Calculate the costs for each type of expenses based on the anticipated requirements of the research project. Make careful to account for any potential additional costs, such as indirect charges or administrative expenditures.

Detailed budget

Provide a detailed budget for the entire research project, outlining the costs for each category of expense. This should include a breakdown of costs by year or by phase of the project, as well as a total budget for the entire project. A model budget breakdown was described in Table 1.

Justification

Justify the costs of each category of expenses, citing the reasons that the money is required for the study. For instance, if hiring costs are involved, detail each team

member's precise duties and how they will advance the research endeavour.⁷⁷

Source of funding

Explain the source of funding for the research project, whether it is from a grant, a sponsor, or other sources. Provide details on any financial support that has been secured or applied for, and how the proposed budget aligns with the funding source's guidelines.

Potential challenges

Acknowledge potential challenges that may impact the budget, such as changes in exchange rates, price fluctuations, or unanticipated costs. Discuss how you plan to mitigate these challenges or adjust the budget if necessary.

Summary

Include a summary of the proposed budget at the end of the budget and justification section, highlighting the major expense categories, their justifications, and how the budget fits into the larger research project plan.

The likelihood of obtaining financing or support can be increased by including a thorough budget and rationale part in the research proposal that shows the project's viability and financial sustainability.⁷⁸

References

When writing references in a research proposal, it is important to follow the guidelines set by the style guide specified by the funding agency or academic institution.⁴⁶ Here are some general steps to follow when writing references in a research proposal:

Style guideline

Determine which style should be used for the research proposal, such as APA, MLA, Chicago, or Harvard. This information should be provided in the guidelines for the funding agency or academic institution.⁷⁹

List of sources

Compile a list of sources used in the research proposal, including books, journal articles, reports, and other relevant materials. This should be done throughout the research process to ensure that sources are properly cited.

Formatting

Format the references according to the requirements of the style guide, including the author's name, publication date, title of the work, and publication information. Be sure to use the correct punctuation and formatting for each type of source, such as books, journal articles, and webpages.⁸⁰

Citations

Use in-text citations throughout the research proposal to refer to the sources cited in the references section. This should be done according to the requirements of the style guide, and may include using the author's name and publication date within parentheses or in footnotes.

Accuracy

Verify the accuracy of each reference by double-checking the information against the original source. This can help ensure that the research proposal is free of errors and is properly attributed to the original authors.⁸¹

Checking

Check to ensure that all sources cited in the research proposal are included in the references section, and that all information required by the style guide is provided. Properly citing sources can help establish the credibility and reliability of your research and demonstrate that you have conducted a thorough and rigorous review of the relevant literature.

Year	2023												2024											
Activities	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1.Planning of Research																								
2. Literature search																								
3.Development of questionnaire																								
4. Pre-testing																								
5.Training for researchers and research assistants																								
6. Data collection																								
7.Data entry and analysis																								
8. Report writing and presentation																								

Fig. 1: A model of Gantt chart for research activities

Research Team

Building a research team for the execution of a research proposal requires careful planning and consideration of several factors, including the specific research questions, goals, and methodology of the project.⁸² Here are some steps to follow when building a research team:

Expertise

Identify the specific expertise required for the research project, including subject matter experts, data analysts, project managers, and other relevant roles. Consider the required skills and experience for each role, as well as any specific certifications or qualifications that may be necessary.

Size

Determine the size of the research team based on the scope and complexity of the project, as well as the available resources and funding. Consider the number of research sites, the volume of data to be collected and analyzed, and the timeline for completing the project.

Recruitment

Recruit team members who have the required expertise, skills, and experience for the project. This may include reaching out to professional networks, posting job ads, or working with recruitment agencies. Be sure to provide a clear description of the project goals, scope, and timeline, as well as the expected roles and responsibilities for each team member.

Training and orientation

Provide training and orientation for the research team, including any necessary technical training, as well as an overview of the project goals, methodology, and timeline. This can help ensure that all team members are aligned with the project objectives and are equipped with the necessary skills and resources to carry out their roles effectively.

Communication protocols

Establish communication protocols and a project management system to ensure that all team members are kept informed of project updates, timelines, and any issues or challenges that arise. Consider using online collaboration tools, regular team meetings, and progress reports keeping everyone informed and engaged.

Monitoring

Monitor the progress of the research project and adjust the team as needed to ensure that the project stays on track and is completed on time and within budget. This may include reallocating resources, reassigning roles, or adjusting the methodology or timeline if necessary.

A well-functioning research team can also help ensure that the project stays on track, is completed on time and within budget, and achieves the desired outcomes.⁸³

Benefits for the Society

When writing about the benefits of a research proposal for society, it is important to consider how the proposed research will address a particular issue or problem that is of concern to society.⁸⁴ Here are some steps to follow when writing about the benefits for society in a research proposal:

Problem identification

Identify the problem or issue that the proposed research aims to address. This could be a social issue, a public health concern, an environmental problem, or another area of concern for society.

Relevance of the issue

Describe the significance of the issue, why it is significant to society, and what might happen if the issue is not resolved. This can aid in demonstrating the necessity of the suggested research and highlighting its possible social advantages.



Table 1: A sample of budget breakup

Heads	Items	Justification	Unit	Unit cost (USD)	Quantity	Total (USD)
Staff (Recurring)	Scientist (Medical)	He/She will function as the project coordinator. [MD community medicine; 5 years of experience]	-	2500	2	5000
	Lab technician	He/She will manage the IT related issues [Bachelor degree in IT; 2 years' experience]	-	1500	2	3000
Subtotal - Staff						8000
Equipment (non-recurring)	Laptop (Model)	For the run the equipment software	1	2500	1	2500
	Statistical software (Model)	For analysis of study data	1	8500	1	8500
	Lab furniture	Lab establishment	2	1500	2	3000
Subtotal - Equipment						14000
Consumables	Office essentials	Files, folders, binders, highlighters, markers, white board, printer cartridges etc	-	2500	1	2500
	Recruitment	Advertisement/recruitment logistics cost	-	2500	1	2500
	Meetings	A review committee will meet before the launch	-	1500	1	1500
Subtotal - Consumables						6500
Travel	Travel for project monitoring	Local travel for staff	-	1000	1	1000
Subtotal - Travel						1000
Institutional overhead (2%)						2500
Grand total						32000

Conduct of research

Indicate the research approach that will be taken to solve the issue, including the research design, the data gathering procedures, and the analytic procedures. This can show that the proposed research is thorough, trustworthy, and likely to yield valuable results.⁸⁵

Potential benefits

Explain the potential benefits that the proposed research will bring to society, such as new knowledge, insights, or solutions that can help address the identified problem. These benefits may be immediate or long-term and may impact a range of stakeholders, such as policymakers, community organizations, or individuals.

Examples

Provide specific examples of how the proposed research may benefit society, such as by informing public policy decisions, improving public health outcomes, or promoting social justice. These examples can help to illustrate the potential impact of the proposed research and make it more concrete and tangible.

Potential risks

Address any potential risks or drawbacks associated with the proposed research, such as ethical concerns or potential negative consequences for certain populations. It is important to acknowledge and address these risks, but also to emphasize the potential benefits and to demonstrate that the benefits outweigh any potential risks.

Write the benefits of a research proposal for society in a way that highlights its potential impact and significance, and that makes a compelling case for funding and support. It is important to emphasize the potential benefits of the proposed research while also acknowledging any potential risks or concerns, and to demonstrate how the research will help address an important problem or issue of concern to society.⁸⁶

Useful Tips

Parts of the proposal

- Establish connections between the parts.
- Clearly and explicitly state the connections between your objectives, methodologies, and outcomes/deliverables.
- Reduce burden on the reviewers.

Beware of conflict of interest

- Disclose both financial and non-financial conflict of interest.

Increasing the chances of success

- Read the call thoroughly.
- Be realistic in designing the project.
- Study successful proposals
- Collaborative network
- Multi-disciplinary team
- Establish good track record before going large.

Developing the proposal

- Start early and leave time for feedback.
- Feedback from a variety of experts
- Consult a statistician.
- Explicit connections between parts of the proposal
- Solid rationale
- Highlight knowledge gap and novelty.
- Highlight impact of work in terms of societal benefit
- Appropriate budget with a strong justification.
- Administrative parts in order.

Cautions

- Developing strong proposal takes time, effort and experience.
- Finally, remember the typical mistakes made when preparing proposals.
- Overly expansive or ambitious goals
- The objectives do not correspond to the study's title or problem statement.
- No literature review or relevant references
- Inadequate information on methodology
- Inappropriate timeframe and schedule of activities – too ambitious
- No justification for Budget – asking for too much or too little

CONCLUSION

Writing a successful project proposal for funding is a critical step towards securing the resources necessary to bring your research ideas to fruition. Crafting a well-written proposal requires careful planning, attention to detail, and a clear understanding of the expectations and requirements of funding agencies. By following the guidelines and best practices outlined in the manuscript, one can significantly improve chances of developing a compelling and persuasive proposal that captures the attention of reviewers and funders. Ultimately, success in securing funding depends on the quality of the proposal and ability to effectively communicate the research ideas and goals. The insights and strategies presented in this manuscript shall well-equip prospective researchers to take on the challenge of writing a successful project proposal and to advance research agenda.

The aforementioned suggestions are not a guarantee of a successful research application. However, they can aid in the development of a well-thought-out and thorough proposal. This can be significant not only to the reviewers who are responsible for assessing your application but also to you, as it provides a clear framework for your work, a general outline of your research direction, and a timeline for accomplishing your goals.

REFERENCES

1. Bell J, Waters S. Ebook: Doing your research project: a guide for first-time researchers. UK. McGraw-hill education. 2018;p. 88–89.
2. Bordage G, Dawson B. Experimental study design and grant writing in eight steps and 28 questions. *Medical Education*. 2003;37(4):376–385. Available from: <https://doi.org/10.1046/j.1365-2923.2003.01468.x>.
3. Klopper H. The qualitative research proposal. *Curationis*. 2008;31(4):62–72. Available from: <https://doi.org/10.4102/curationis.v31i4.1062>.
4. Marshall C, Rossman GB. Designing Qualitative Research. 7th ed. United states. SAGE Publications. 2014.
5. Denscombe M. Research Proposals: A Practical Guide. 2012.
6. Büyüközkan G, Göçer F. Digital Supply Chain: Literature review and a proposed framework for future research. *Computers in Industry*. 2018;97:157–177. Available from: <https://doi.org/10.1016/j.compind.2018.02.010>.
7. Levac D, Colquhoun H, O'Brien KK. Scoping studies: advancing the methodology. *Implementation science*. 2010;5:1–9. Available from: <https://doi.org/10.1186/1748-5908-5-69>.
8. Baskarada S, Baskarada S. Qualitative Case Study Guidelines. *Defence Science and Technology Organisation*. 2014;19(40):1–25. Available from: <https://doi.org/10.46743/2160-3715/2014.1008>.
9. Bunnell G, Jr EJJ. The effect of mandated planning on plan quality: a fresh look at what makes “a good plan”. *Journal of the American Planning Association*. 2011;77(4):338–353. Available from: <https://doi.org/10.1080/01944363.2011.619951>.
10. Vasanthakumari S. Writing research proposal. *World Journal of Advanced Research and Reviews*. 2021;10(1):184–190. Available from: <https://doi.org/10.30574/wjarr.2021.10.1.0138>.
11. Faff RW. A simple template for pitching research. *Accounting & Finance*. 2015;55:311–347. Available from: <https://doi.org/10.1111/acfi.12116>.
12. Gratton C, an Jones. Research methods for sports studies. 2nd ed. New York. Routledge. 2010.
13. Belgrave LL, Zablotsky D, Guadagno MA. How do we Talk to Each other? Writing Qualitative Research for Quantitative Readers. *Qualitative Health Research*. 2002;12(10):1427–1439. Available from: <https://doi.org/10.1177/1049732302238753>.
14. Facione PA. Critical thinking: What it is and why it counts. *Insight assessment*. 2011;1:1–30.
15. Brewerton PM, Millward LJ. Organizational Research Methods: A Guide for Students and Researchers. India. SAGE Publications. 2001.
16. Mackenzie A, Nickerson P. The time trap: The classic book on time management. New York. AMACOM. 2009;p. 111–112.
17. Burkhardt H, Schoenfeld AH. Improving Educational Research:Toward a More Useful, More Influential, and Better-Funded Enterprise. *Sage Journals*. 2003;32(9):3–14. Available from: <https://doi.org/10.3102/0013189X032009003>.
18. Chen E, Wallace D, Leos C, Merino Y. Examining the White Supremacist Practices of Funding Organizations for Public Health Research and Practice: A Composite Narrative From Female, BIPOC Junior Researchers in Public Health. *Health Promotion Practice*. 2023;24(1):45–58. Available from: <https://doi.org/10.1177/15248399221129864>.
19. Braun D. The role of funding agencies in the cognitive development of science. *Research Policy*. 1998;27(8):807–821. Available from: [https://doi.org/10.1016/S0048-7333\(98\)00092-4](https://doi.org/10.1016/S0048-7333(98)00092-4).

20. Audretsch DB, Link AN, Scott JT. Public/private technology partnerships: evaluating SBIR-supported research. In: *The Social Value of New Technology*. Edward Elgar Publishing. 2019;p. 264–278.
21. Boote DN, Beile P. Scholars Before Researchers: On the Centrality of the Dissertation Literature Review in Research Preparation. *Educational Researcher*. 2005;34(6):3–15.
22. Gitlin LN, Kolanowski A, Lyons KJ. Successful grant writing: Strategies for health and human service professionals. 5th ed. Springer Publishing Company. 2020.
23. Eccles RG. The performance measurement manifesto. *Harvard business review*. 1991;69(1):131–137.
24. Torka M. Projectification of Doctoral Training? How Research Fields Respond to a New Funding Regime. *Minerva*. 2018;56(1):59–83.
25. Browning BA. Grant writing for dummies. 5th ed. John Wiley & Sons. 2022.
26. Spicer N, Hamza YA, Berhanu D, Gautham M, Schellenberg J, Tadesse F, et al. 'The development sector is a graveyard of pilot projects!' Six critical actions for externally funded implementers to foster scale-up of maternal and newborn health innovations in low and middle-income countries. *Globalization and Health*. 2018;14(1):1–3. Available from: <https://doi.org/10.1186/s12992-018-0389-y>.
27. Neumeier S. Why do Social Innovations in Rural Development Matter and Should They be Considered More Seriously in Rural Development Research? - Proposal for a Stronger Focus on Social Innovations in Rural Development Research. *Sociologia Ruralis*. 2012;52(1):48–69. Available from: <https://doi.org/10.1111/j.1467-9523.2011.00553.x>.
28. Barnes BJ, Austin AE. The Role of Doctoral Advisors: A Look at Advising from the Advisor's Perspective. *Innovative Higher Education*. 2009;33(5):297–315. Available from: <https://doi.org/10.1007/s10755-008-9084-x>.
29. American Psychological Association. Publication manual. Washington, DC. American Psychological Association. 1983.
30. Stufflebeam DL. The CIPP model for evaluation. Evaluation models: Viewpoints on educational and human services evaluation. 2000.
31. Gastel B, Day RA, ABC-CLIO. How to write and publish a scientific paper. 2022.
32. West VL. Teaching Written Communication Skills in Professional Selling: The Cover Letter. *Journal of Marketing Education*. 2006;28(3):205–217. Available from: <https://doi.org/10.1177/0273475306291465>.
33. Thomas G. How to do your research project: A guide for students. How to Do Your Research Project. 4th ed.. 2022.
34. Phillips E, Ebook JC. Ebook: How to Get a PhD: A Handbook for Students and Their Supervisors 7e. 7th ed.. 2022.
35. Al-Riyami A. How to prepare a Research Proposal. *Oman medical journal*. 2008;23(2):66–69. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3282423/>.
36. Paul-Hus A, Desrochers N. Acknowledgements are not just thank you notes: A qualitative analysis of acknowledgements content in scientific articles and reviews published in 2015. *PLOS ONE*. 2019;14(12):e0226727. Available from: <https://doi.org/10.1371/journal.pone.0226727>.
37. Dunn J, Steginga SK, Rosoman N, Millichap D. A Review of Peer Support in the Context of Cancer. *Journal of Psychosocial Oncology*. 2003;21(2):55–67. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK69735/>.
38. Denscombe M. EBOOK: The good research guide: For small-scale social research projects. 7th ed.. 2017.
39. Bahadoran Z, Jeddi S, Mirmiran P, Ghasemi A. The Principles of Biomedical Scientific Writing: Introduction. *International Journal of Endocrinology and Metabolism*. 2019;16(4):e84795. Available from: <https://doi.org/10.5812/ijem.84795>.
40. Heath M, Tynan C. Crafting a research proposal. . *The Marketing Review*. 2010;10(2):147–168. Available from: <http://dx.doi.org/10.1362/146934710X505753>.
41. Hsieh HF, Shannon SE. Three approaches to qualitative content analysis. *Qualitative Health Research*. 2005;15(9):1277–1288. Available from: <https://doi.org/10.1177/1049732305276687>.
42. Bamford J, Day RR. Extensive reading activities for teaching language. 7th ed. Cambridge University Press. 2004.
43. Lovejoy TI, Revenson TA, France CR. Reviewing manuscripts for peer-review journals: a primer for novice and seasoned reviewers. *Annals of Behavioral Medicine*. 2011;42(1):1–13. Available from: <https://doi.org/10.1007/s12160-011-9269-x>.
44. Morgan CA, Sperry BR, Warner JE, Protopapas AA, Borowiec JD, Higgins LL, et al. Potential development of an intercity passenger transit system in Texas: final project report. 2010. Available from: <http://tti.tamu.edu/documents/0-5930-2.pdf>.
45. Baron MA. Guidelines for writing research proposals and dissertations. 2008.
46. Blanco MA, Gruppen LD, Artino JAR, Uijtdehaage S, Szauter K, Durning SJ. How to write an educational research grant: AMEE Guide No. 101. *Medical Teacher*. 2016;38(2):113–122. Available from: <https://doi.org/10.3109/0142159x.2015.1087483>.
47. Thomas JR, Martin P, Etnier J, Silverman SJ. Research methods in physical activity. In: *Human kinetics*. 2022;p. 124–126.
48. Ramdhani A, Ramdhani MA, Amin AS. Writing a Literature Review Research Paper: A step-by-step approach. *International Journal of Basic and Applied Science*. 2014;3(1):47–56. Available from: <https://digilib.uinsgd.ac.id/5129/1/08IJBAS%283%29%281%29.pdf>.
49. Payne G, Payne J. Key concepts in social research. SAGE Publications, Ltd. 2004.
50. Moge T. Research on English Language Teaching. 2021.
51. Wolpaw JR, Birbaumer N, Heetderks WJ, Mcfarland DJ, Peckham PH, Schalk G, et al. Brain-computer interface technology: a review of the first international meeting. *IEEE Transactions on Rehabilitation Engineering*. 2000;8(2):164–173. Available from: <https://doi.org/10.1109/tre.2000.847807>.
52. Grant C, Osanloo A. Understanding, Selecting, and Integrating a Theoretical Framework in Dissertation Research: Creating the Blueprint for Your "House". *Administrative Issues Journal Education Practice and Research*. 2014;4(2):4–4. Available from: <https://files.eric.ed.gov/fulltext/EJ1058505.pdf>.
53. Fillmore CJ, Johnson CR, Petruck MR. Background to framenet. *International journal of lexicography*. 2003;16:235–250.
54. May T, Perry B. Social research: Issues, methods and process. 2022.
55. Rowley J, Slack F. Conducting a literature review. *Management Research News*. 2004;27(6):31–39.
56. Agarwal R, Lucas JHS. The Information Systems Identity Crisis: Focusing on High-Visibility and High-Impact Research. *MIS Quarterly*. 2005;29(3):381–398.
57. Sekaran U, Bougie R. Research methods for business: A skill building approach. 2016;p. 88–89.
58. Paltridge B. Thesis and dissertation writing: Preparing ESL students for research. *English for Specific Purposes*. 1997;16(1):61–70. Available from: [https://doi.org/10.1016/S0889-4906\(96\)00028-2](https://doi.org/10.1016/S0889-4906(96)00028-2).
59. Mårtensson P, Fors U, Wallin SB, Zander U, Nilsson GH. Evaluating research: A multidisciplinary approach to assessing research practice and quality. *Research Policy*. 2016;45(3):593–603. Available from: <https://doi.org/10.1016/j.respol.2015.11.009>.
60. Ferguson RE, Dickens WT. Urban problems and community development. Informa UK Limited. 2011;p. 88–89.
61. Palinkas LA, Horwitz SM, Green CA, Wisdom JP, Duan N, Hoagwood K. Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. Administration and policy in mental health and mental health services research. 2015.
62. Campbell S, Greenwood M, Prior S, Shearer T, Walkem K, Young S, et al. Purposive sampling: complex or simple? Research case examples. *Journal of Research in Nursing*. 2020;25(8):652–661. Available from: <https://doi.org/10.1177/1744987120927206>.
63. Travis P, Bennett S, Haines A, Pang T, Bhutta Z, Hyder AA, et al. Overcoming health-systems constraints to achieve the Millennium Development Goals. *The Lancet*. 2004;364(9437):900–906. Available from: [https://doi.org/10.1016/s0140-6736\(04\)16987-0](https://doi.org/10.1016/s0140-6736(04)16987-0).
64. Jesson JK, Lacey FM. How to do (or not to do) a critical literature review. . *Pharmacy education*. 2006;6(2):139–148. Available from: <https://doi.org/10.1080/15602210600616218>.
65. Walsh D, Downe S. Meta-synthesis method for qualitative research: a literature review. . *Journal of advanced nursing*. 2005;50(2):204–211.

- Available from: <https://doi.org/10.1111/j.1365-2648.2005.03380.x>.
66. Kingston W. Innovation needs patents reform. *Research Policy*. 2001;30(3):403–423. Available from: [https://doi.org/10.1016/S0048-7333\(00\)00090-1](https://doi.org/10.1016/S0048-7333(00)00090-1).
 67. Hattenbach B, Glucoft J. Patents in an era of infinite monkeys and artificial intelligence. *Stanford Technology Law Review*. 2015;19(2):32–51. Available from: <https://law.stanford.edu/wp-content/uploads/2017/10/PATENTS-IN-AN-ERA-OF-INFINITE-MONKEYS-AND-ARTIFICIAL-INTELLIGENCE.pdf>.
 68. Peffers K, Tuunanen T, Rothenberger MA, Chatterjee SA. Design science research methodology for information systems research. *Journal of Management Information Systems*. 2007;24(3):45–77. Available from: <https://doi.org/10.2753/MIS0742-1222240302>.
 69. Mcelroy LM, Ladner DP. Defining the Study Cohort: Inclusion and Exclusion Criteria Success in Academic Surgery. *Clinical Trials*. 2014;p. 131–139.
 70. Patel MX, Doku V, Tennakoon L. Challenges in recruitment of research participants. *Advances in Psychiatric Treatment*. 2003;9(3):229–238. Available from: <https://doi.org/10.1192/apt.9.3.229>.
 71. Amankwaa L. Creating Protocols for Trustworthiness in Qualitative Research. *Journal of Cultural Diversity*. 2016;23(3):121–127. Available from: <https://pubmed.ncbi.nlm.nih.gov/29694754/>.
 72. Ong HY, Wang C, Zainon N. Integrated earned value Gantt chart (EV-Gantt) tool for project portfolio planning and monitoring optimization. *Engineering Management Journal*. 2016;28(1):39–53. Available from: <https://doi.org/10.1080/10429247.2015.1135033>.
 73. Estrella M, Blauert J, Gonsalves J, Campilan D, Gaventa J, Guijt I, et al. Learning from change: Issues and experiences in participatory monitoring and evaluation. 2000;p. 220–221.
 74. McCormack B, Mccance TV. Development of a framework for person-centred nursing. *Journal of advanced nursing*. 2006;56(5):472–479. Available from: <https://doi.org/10.1111/j.1365-2648.2006.04042.x>.
 75. Qu SQ, Dumay J. The qualitative research interview. *Qualitative Research in Accounting & Management*. 2011;8(3):238–264.
 76. Kanfer R. Motivation theory and industrial and organizational psychology. In: Handbook of industrial and organizational psychology;vol. 1. 1990;p. 75–130.
 77. Bias RG, Mayhew DJ. Cost-justifying usability: An update for the Internet age. Elsevier. 2005;p. 6–9.
 78. Pettit RR, Singer RF. Small business finance: a research agenda. *Financial management*. 1985;14(3):47–60. Available from: <https://doi.org/10.2307/3665059>.
 79. Locke LF, Spirduso WW, Silverman SJ. Proposals that work: A guide for planning dissertations and grant proposals. Sage Publications. 2013;p. 142–187.
 80. Kratochvíl J. Comparison of the accuracy of bibliographical references generated for medical citation styles by EndNote, Mendeley, RefWorks and Zotero. *The Journal of Academic Librarianship*. 2017;43(1):57–66. Available from: <https://doi.org/10.1016/j.acalib.2016.09.001>.
 81. Shapiro I, Brin C, Bédard-Brûlé I, Mychajlowycz K. Verification as a strategic ritual: How journalists retrospectively describe processes for ensuring accuracy. *Journalism Practice*. 2013;7(6):657–673. Available from: <https://doi.org/10.1080/17512786.2013.765638>.
 82. Grover V, Jeong SR, Kettinger WJ, Teng JTC. The Implementation of Business Process Reengineering. *Journal of Management Information Systems*. 1995;12(1):109–144.
 83. Kaplan RS, Norton DP. The office of strategy management. *Harvard Business Review*. 2005;83(10):72–72. Available from: <https://hbr.org/2005/10/the-office-of-strategy-management>.
 84. Wallerstein NB, Duran B. Using Community-Based Participatory Research to Address Health Disparities. *Health Promotion Practice*. 2006;7(3):312–323. Available from: <https://doi.org/10.1177/1524839906289376>.
 85. Abutabenjeh S, Jaradat R. Clarification of research design, research methods, and research methodology: A guide for public administration researchers and practitioners. *Teaching Public Administration*. 2018;36:237–258. Available from: <https://doi.org/10.1177/0144739418775787>.
 86. Ostrom AL, Bitner MJ, Brown SW, Burkhard KA, Goul M, Smith-Daniels V, et al. Moving Forward and Making a Difference: Research Priorities for the Science of Service. *Journal of Service Research*. 2010;13(1):4–36. Available from: <https://journals.sagepub.com/doi/pdf/10.1177/1094670509357611>.