Proposal Writer's Guide

This Guide is intended for faculty and staff members with little or no experience in writing proposals for sponsored activities.

Writing a research proposal is a problem of persuasion. Assume that your reader is a busy, impatient, skeptical person who has no reason to give your proposal special consideration and who is faced with many more requests than he can read thoroughly. Such a reader wants to find out quickly and easily the answers to the following questions:

- What do you want to do, how much will it cost, and how much time will it take?
- How does the proposed project relate to the Michener's and your department's interests?
- What difference will the project make to: your department, your students, your discipline, the Province, the country, the world, or whatever the appropriate categories are?
- What has already been done in the area of your project?
- How do you plan to do it?
- How will the results be evaluated?
- Why should you, rather than someone else, do this project?

Two Preliminary Steps
You will benefit by consulting two persons at an early stage in the planning of the proposal: your Division Director and Applied Research Coordinator.

- *Your Division Director*, whom you will eventually be asking to approve the proposal and thereby endorse your plans for staff and facility commitments, should be informed of your intentions and especially of any aspect of the proposed project that might conceivably affect departmental administration or your departmental duties. Early discussion of potential problems will smooth the way for the proposal later. These persons can provide valuable help and advice both in substantive and administrative matters.
- *Applied Research* is a general source of help for the whole process of planning and writing the proposal. They can give you the latest guidelines, know the deadlines, can explain funding peculiarities that might affect your preparation of the proposal, can sometimes put you in touch with others internally and/or externally working in similar areas or capable of helping you in some way, can judge whether any additional officials need to be informed at an early stage about your proposal, can help you work out a detailed budget appropriate to the work you wish to undertake, and in general can raise the pertinent questions that must be resolved before the proposal will be approved for submission. These questions may concern, for example, human subjects review, the use of animals, potential conflicts of interest, off-campus work, subcontracting, space rental, staff additions, consultants, equipment purchase, biological hazards, proprietary material, cost sharing, and many other matters.

The Parts of a Research Proposals
Typical parts of a research proposal are:
- (1) Title (or Cover) Page
- (2) Abstract
- (3) Table of Contents
- (4) Introduction (including Statement of Problem, Purpose of Research, and Significance of Research)
- (5) Background (including Literature Survey)
- (6) Description of Proposed Research (including Method or Approach)
- (7) Description of Relevant Institutional Resources
- (8) List of References
- (9) Personnel
- (10) Budget

The Title (or Cover) Page
Generally, the principal investigator, his or her department head, and the Applied Research Coordinator sign the title page. In addition, the title page usually includes the Research reference number for the proposal, where the proposal is being submitted, the title of the proposal, the proposed starting date and budget period, the total funds requested, the name of the Division unit submitting the proposal, and the date submitted. A good title is usually a compromise between conciseness and explicitness. Although titles should be comprehensive enough to indicate the nature of the proposed work, they should also be brief. One good way to cut the length of titles is to avoid words that add nothing to a reader's understanding, such as "Studies on...," "Investigations...," or "Research on Some Problems in...."

The Abstract
Most readers rely on the Abstract initially to give them a quick overview of the proposal and later to refresh their memory of its main points. The abstract is also used in compilations of research projects funded or in disseminating information about successful projects. Though it appears first, the abstract should be written last, as a concise summary (approximately 200 words) of the proposal. It should appear on a page by itself. To present the essential meaning of the proposal, the abstract should summarize or at least suggest the answers to all the questions mentioned in the Introduction above, except the one about cost (which is excluded on the grounds that the abstract is subject to a wider public distribution than the rest of the proposal). The major objectives of the project and the procedures to be followed in meeting these objectives should be mentioned. The abstract speaks for the proposal when it is separated from it, provides the reader with his first impression of the request, and, by acting as a summary, frequently provides him also with his last. Thus it is the most important single element in the proposal.

The Table of Contents
Very brief proposals with few sections ordinarily do not need a table of contents; the guiding consideration in this is the reader's convenience. Long and detailed proposals may require, in addition to a table of contents, a list of illustrations (or figures) and a list of tables. If all of these are included, they should follow the order mentioned. The table of contents should list all major parts and divisions (including the abstract, even though it precedes the table of contents). Subdivisions usually need not be listed. Again, the convenience of the reader should be the guiding consideration.

The Introduction
This should begin with a capsule statement of what is being proposed and then should proceed to introduce the subject to a stranger. You should not assume that your reader is familiar with your subject. It should give enough background to enable a lay person place your particular research problem in a context of common knowledge and should show how its solution will advance the field or be important for some other work. Be careful not to overstate, but do not neglect to state very specifically the importance of your research.

In introducing the research problem, it is sometimes helpful to say what it is not, especially, if it could easily be confused with related work. You may also need to explain the underlying assumption of your research or the hypotheses you will be using. If the detailed exposition of the proposed research will be long or complex, the introduction may well end by specifying the order and arrangement of the sections. Such a preview helps a reviewer begin his reading with an orderly impression of the proposal and the assurance that he can get from it what he needs to know. The general tone of the introduction should reflect a sober self-confidence. A touch of enthusiasm is not out of place, but extravagant promises are anathema to most reviewers.

The Background Section
This section may not be necessary if the proposal is relatively simple and if the introduction can present the relevant background in a few sentences. If previous or related work must be discussed in some detail, however, or if the literature of the subject must be reviewed, a background or literature review section is desirable. Sufficient detail should be given in this discussion
(1) to make clear what the research problem is and exactly what has been accomplished;
(2) to give evidence of your own competence in the field; and
(3) to show why the previous work needs to be continued.

Literature reviews should be selective and critical. Reviewers merely want to know the especially pertinent works and your evaluation of them. Discussions of work done by others should therefore lead the reader to a clear impression of how you will be building upon what has already been done and how your work differs from theirs. It is important to establish what is original in your approach, what circumstances have changed since related work was done, or what is unique about the time and place of the proposed research.

The Description of Proposed Research
This section is addressed to other specialists in your field, and may need several subsections. It is the primary concern of the technical reviewers. Be realistic in designing the program of work; the research plan should be scaled down to a more specific and more manageable project that will permit the approach to be evaluated and that, if successful, will form a sound basis for further work. Your proposal should distinguish clearly between long-range research goals and the short-range objectives for which funding is being sought. It may be best to begin this section with a short series of explicit statements listing each objective, in quantitative terms if possible.
- If your first year must be spent developing an analytical method or laying groundwork, spell that out as Phase 1. At the end of the year you will report that you have accomplished something and are ready to undertake Phase 2.
- Be explicit about any assumptions or hypotheses the research method rests upon.
- Be clear about the focus of the research. In defining the limits of the project it is helpful to pose the specific question or questions the project is intended to answer.
- Be as detailed as possible about the schedule of the proposed work. When will the first step be completed? When can subsequent steps be started? What must be done before what else, and what can be done at the same time? For complex projects a calendar detailing the projected sequence and interrelationship of events gives the assurance of careful planning.
- Be specific about the means of evaluating the data or the conclusions. Try to imagine the questions or objections of a hostile critic and show that the research plan anticipates them.
- Be certain that the connection between the research objectives and the research method is evident.

The Description of Relevant Institutional Resources
While the nature of this section depends on your project, in general, it details the resources available to the proposed project. Some relevant points may be the institution's demonstrated competence in the pertinent research area, its abundance of experts in related areas that may indirectly benefit the project, its supportive services that will directly benefit the project, and its unique or unusual research facilities or instruments available to the project.

The List of References
This list is desirable only if the proposal contains six or more references. Otherwise, the references can be inserted in the text within parentheses, like this (A. N. Author, " An Article," A Professional Journal, XX [1987], pp. 45-50). If a list of references is to be included, it is placed at the end of the text and before the sections on personnel and budget. The items should be numbered and should be in the order in which they are first referred to in the text.

The Personnel Section
This explains the proposed personnel arrangements and the biographical data sheets for each of the main contributors to the project. The explanation should specify how many persons at what percentage of time and in what academic categories will be participating in the project. If the program is complex and involves people from other departments or colleges, the organization of the staff and the lines of responsibility should be made clear. Any student participation, paid or unpaid, should be mentioned, and the nature of the proposed contribution detailed. If any persons must be hired for the project, say so, and explain why. The biographical data sheets should follow immediately after the explanatory text of the " personnel" section. All biographical data sheets within the proposal should be in a common format.

The Budget Section
The budget should be worked out with the Research Coordinator. Usually, there is a tabular budget, a budget summary and explanation or " budget justification" if the budget is complicated or if all its details are not made completely clear by the text of the proposal. The need for consultants, for example, or the unavailability within the Institution of an item of equipment proposed for purchase may need to be explained. Foreign travel should be specifically detailed and justified, not combined with domestic travel, and the need to travel to professional meetings should be tied specifically to the proposed project, if possible. Typical divisions of the tabular budget are personnel, equipment, supplies, travel, and indirect costs. Other categories, of course, can be added as needed. The budget should make clear how the totals for each category of expenses are reached. Salary information, for example, often needs to be specified in detail: principal investigator (1/2 time for 3 months at $24,000 [9-month appointment]) = $4,000. If salary totals involve two different rates (because of an anticipated increase in salary during the budget period), this should be made clear.

The Appendices
Appendices to proposals are occasionally used for letters of endorsement, promises of participation, biographical data sheets (when there are too many–say, eight or more–to be conveniently placed in the "personnel" section), and reprints of relevant articles. If two or more appendices are included in a proposal, they should be designated Appendix A, Appendix B, etc.

Why Proposals are Rejected

Assuming that funds are available, that geographical distribution is not a criterion, and that political considerations are not present, the success of a proposal will depend both on the quality of the project itself and the quality of its presentation in the proposal. Different reviewers, of course, will weigh merits and defects differently, but the following list of shortcomings of 605 proposals rejected by the National Institutes of Health is worth pondering. The list is derived from an article by Dr. Ernest M. Allen (Chief of the Division of Research Grants, National Institutes of Health) that appeared in Science, Vol. 132 (November 25, 1960), pp. 1532-34. (The percentages given total more than 100 because more than one item may have been cited for a particular proposal.)

Problem (58 percent)

33.1   The problem is not of sufficient importance or is unlikely to produce any new or useful information.
8.9   The proposed research is based on a hypothesis that rests on insufficient evidence, is doubtful, or is unsound.
8.1   The problem is more complex than the investigator appears to realize.
4.8   The problem has only local significance, or is one of production or control, or otherwise fails to fall sufficiently clearly within the general field of health-related research.
3.1   The problem is scientifically premature and warrants, at most, only a pilot study.
3.0   The research as proposed is overly involved, with too many elements under simultaneous investigation.
2.6   The description of the nature of the research and of its significance leaves the proposal nebulous and diffuse and without a clear research aim.

Approach (73 percent)

34.7   The proposed tests, or methods, or scientific procedures are unsuited to the stated objective.
28.8   The description of the approach is too nebulous, diffuse, and lacking in clarity to permit adequate evaluation.
14.7   The overall design of the study has not been carefully thought out.
8.1   The statistical aspects of the approach have not been given sufficient consideration.
7.4   The approach lacks scientific imagination.
6.8   Controls are either inadequately conceived or inadequately described.
3.8   The material the investigator proposes to use is unsuited to the objective of the study or is difficult to obtain.
2.5   The number of observations is unsuitable.
1.0   The equipment contemplated is outmoded or otherwise unsuitable.

Investigator (55 percent)

32.6   The investigator does not have adequate experience or training for this research.
13.7   The investigator appears to be unfamiliar with recent pertinent literature or methods.
12.6   The investigator's previously published work in this field does not inspire confidence.
5.0   The investigator proposes to rely too heavily on insufficiently experienced associates.
3.8   The investigator is spreading himself too thin; he will be more productive if he concentrates on fewer projects.
1.7   The investigator needs more liaison with colleagues in this field or in collateral fields.

Other (16 percent)

10.1   The requirements for equipment or personnel are unrealistic.
3.0   It appears that other responsibilities would prevent devotion of sufficient time and attention to this research.
2.3   The institutional setting is unfavorable.
1.5   Research grants to the investigator, now in force, are adequate in scope and amount to cover the proposed research.