

Writing Grant Proposals

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As a follow up to “Applying for Research Grants” [Observer, September 2003], this article describes general elements of each section of a grant proposal. Keep in mind the content and organization of proposals will vary by granting agencies.

Abstract

The abstract is one of the most important parts of your proposal and will likely be the most frequently read section. The length, content, and tense of an abstract for a grant proposal are different from that of an abstract written for a journal article (Locke, Spirduso, & Silverman, 2000). Abstracts are typically 200-300 words and written in the future tense. They summarize all parts of the grant application, including your data analysis plan, resources that will support your proposed study, and the environment in which your research will take place. The abstract should be written last to ensure inclusion of all parts of your proposal. The writing should be clear and concise to make a positive first impression on the grant reviewers.

Statement of the Problem

The statement of the problem, or why your research should be conducted, is a crucial section that should receive careful consideration. This section describes what you want to do, (i.e., what research questions you will address), what goals you will achieve, and what objectives will help you achieve your goals (Herek, 1995). The project goals are your vision, the general end state of your research. For example, your project may establish a model, develop a new theory, or create an effective training program. Be careful not to confuse your goals with your research objectives, which are the means of accomplishing your goals. Your research objectives should be stated clearly in declarative form, in order of importance, and in measurable terms. The goal of “creating an effective training program” is somewhat vague and immeasurable – what is the meaning of “effective?” The research objective clarifies the goal by stating it in measurable terms; for example, “increasing worker productivity by 20 percent over two years.”

Hypotheses

Your hypotheses provide answers to your research questions. Hypotheses should first be stated in theoretical terms and then in empirical terms (Herek, 1995). The theoretical hypotheses are general statements about the relationships among variables of interest. An example of a theoretical hypothesis is, “Employees with greater organizational commitment will be more productive.” Hypotheses should then be stated in empirical terms, meaning that they must be measurable and falsifiable. An example of an empirical hypothesis is, “Employees who score above the mean on the organizational commitment scale will have at least 10 percent greater productivity than employees who score below the mean.” State your hypothesis in the corresponding order of your research questions. It is wise to propose and test alternative hypotheses and provide theoretical explanations for them. Anticipating your results tells your reader that you thoroughly understand your research area.

Theoretical framework

The theoretical framework tells readers why you chose your research questions, answered them in a particular way, and proposed your particular hypotheses (Herek, 1995). You should clearly describe the theory, demonstrate how it applies to your research topic, and define any key terms in this section. The theoretical framework should explain how you connected your theoretical hypotheses to the empirical hypotheses.

Literature Review

The literature review section of a grant proposal is similar to that of an empirical article, but it is often much shorter. Given space limitations, it is important to only discuss literature that is directly relevant to your research topic. The literature review should demonstrate that this work has not been done before, or if previously conducted, had serious flaws or employed a different population (Herek, 1995). You should describe how your work will overcome previous limitations and should capitalize on the strengths of past research. Be sure to critically evaluate the literature and include literature that tells more than one side of the story. Describe the corresponding literature in the same order that you listed your research questions and hypotheses.

Method and Design

The method and design section describes in specific detail how you will answer your research questions and test your hypotheses. Unlike an empirical article, you must not only describe your sample, but also must describe how you will gain access to your participants. In addition to explaining your methods and instruments, you must justify why they are the most appropriate methods and instruments and also why others were not chosen (Herek, 1995). The reliability and validity of all instruments should be included. When explaining the procedures, describe the process from the participant's perspective. Include a timeline for your proposed project and a back-up plan. For example, describe how your study will deal with attrition and similar experimental issues (Taylor, 1995).

Data Analysis Plan

One of the most common pitfalls of proposals is an insufficient or inappropriate data analysis plan (Baron, 1986). Perhaps some investigators are accustomed to collecting data first, then figuring out the data analysis strategy later. With grant proposals, you must have all data analysis strategies clearly planned so that a reviewer reading this section will have a clear picture of your entire project (Taylor, 1995). Make sure that each data analysis can appropriately test each hypothesis. Be sure to include a power analysis to justify your sample size and describe how you will minimize Type I and II errors. If appropriate, discuss how you will prevent contamination across treatment groups.

Significance

Your proposed project may have one or several types of significant contributions to the field. Herek (1995) describes four types of significance, including theoretical, methodological, applied, and social significance. Theoretical significance is achieved when your project contributes to basic knowledge and helps refine current theories or proposes a new theory. Methodological significance involves the use of new and innovative methods or improvement of existing methods. Applied significance involves providing answers to real-world problems. Finally, social significance provides society with something useful and valuable.

References

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